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Special Issue on
Science & Technology For Utopias

Special Issue Editors:
Martyn Lowe and Toni Samek

Information for Social Change is an activist organisation that examines issues of censorship, freedom and ethics amongst library and information workers. It is committed to promoting alternatives to the dominant paradigms of library and information work and publishes its own journal, *Information for Social Change* (freely available online at http://www.libr.org/isc). Information for Social Change is an Organisation in Liaison with the Chartered Institute of Library and Information Professionals (CILIP).

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EDITORIAL

This issue of ISC aims to provide insight into 21st century science and technology initiatives designed for utopian societies. The intended audience is hands-on utopian makers, as well as those individuals and groups who share in the vision of utopian futures and who care to encourage adaptations, constructive intercultural dialogue, and international participation. Our idea for this issue of ISC was prompted by two of our interests: (1) in knowing more about general action research, development based participatory action research, case studies, and DIY (do-it-yourself) aspects of creating low cost, long term science and technology solutions to our present ecological mess, which also make for viable long term social justice (e.g., ethical aid, alternative transportation, green housing, and slow food movements) and the role of library and information workers and work therein, and (2) thinking about information ecology, sharing, and recycling as they relate to the production of human and natural resources and how best to achieve egalitarian societies in which there is free flow of information (e.g., social, cultural, communication, and information systems which combine ICT within egalitarian decision making processes in the context of non-proprietary systems and free information movements).

As we were editing this ISC issue, a survey on education for sustainable development (ESD) was posted online with the objective "to gather an inventory of critical issues that frequently emerge in sustainable development." The eight UNESCO themes are as follows: 1. Education for gender equality; 2. Education for health promotion; 3. Education for environmental stewardship; 4. Education for rural development; 5. Education for cultural diversity; 6. Education for peace and human security; 7. Education for sustainable urbanization; and, 8. Education for sustainable consumption. (See: http://tinyurl.com/movr9w) The relevance to our theme is powerful. Historically ideas about utopian societies have been expressed, or envisaged, within political, sociological, and philosophical contexts. Many of the most promising utopian dreams have also

been set within rural settings or post industrial contexts (e.g., in the William Morris novel *News From Nowhere).* With the exception of a very few novels that explore concepts of individual liberty within futuristic societies, science and technology has often been viewed as the problem which besets the distopian world. This issue of ISC has a premise that in order to create a utopian society we will need to use the very best of science and technology in order to clean up our existing ecological problems on a global scale. What follows from that thinking is the realization that, in the long term, only the most sustainable science and technology will be able to maintain and nurture the kind of world we would like to inhabit; a world free of pollution and in which egalitarian society thrives. We offer here no utopian dreams or blueprints on how a utopian dream might be achieved. We include no futuristic manifestos. We did receive from our contributors some ideas, which upon reflection, just might prompt some of us to act on making something of a better world to live in.

Our issue of ISC begins with "SCIENTIFIC UTOPIAS" a fascinating literary philosophy styled article from the UK by Andrew Hudson, in which he asserts that while science offers a possible means for utopia, the application of social sciences is a necessary condition for democratic functioning in order that the science itself is not employed for perverted ends. This inquiry is followed by Ambers Burtis' pressing work from the USA titled "MANAGING INDIGENOUS KNOWLEDGE AND TRADITIONAL CULTURAL EXPRESSIONS: IS TECHNOLOGY THE SOLUTION?" in which she discusses contemporary issues around the management of indigenous knowledge and traditional cultural expressions in the cultural network. She focuses on the need for ethical policies, critical approaches to status quo information management, efforts by the World Intellectual Property Organization and the American Library Association to draft policy in this area, and the urgency of collaboration with indigenous communities. Next, we include co-editor Martyn Lowe's musings in "IT'S NOT UTOPIA, BUT LIFESTYLE NOW". Herein Martyn muses on how lifestyle is the key to a better tomorrow and provides brief comment on recycling and current energy usage, good quality products, walking and public transport, vegetarianism, as well as wind power and solar energy. After that, we offer the vital work "DIGITAL DYSTOPIA: OVERCOMING DIGITAL DEPRIVATION IN THE UNITED STATES" by Cheris Carpenter, who critically examines the role that American public libraries play in the urgent context of the digital divide. She analyzes the ways in which

networked services can help disadvantaged communities and explores coordinated efforts of local municipalities and public libraries in the provision of public Internet access. Her work is followed by a personal and moving contemplation, “ON FREEDOM, THOUGHT AND TECHNOLOGY: A WOMAN’S PERSPECTIVE”, (accessible in both English and Spanish language) written by a woman from Spain who goes only by the name of michelle. Richard Hayman’s Canadian contribution, “HUMAN RIGHTS SOFTWARE:INFORMATION SUPPORT SOLUTIONS FOR SOCIAL JUSTICE, is a cutting edge exploration of how human rights centres and non-governmental organizations (NGOs) have crucial information support needs, many of which can be met by the existing and ongoing development of information technology software applications. Richard examines emancipatory tools to determine: the technologies in use, emergent, and under development; their possible usage in the critical arenas under discussion; and, the greater effects of these technologies as they relate to social justice and information access in the global information society. He hopes to help raise awareness within human rights communities and information centres about the existence and availability of these tools, so that these groups may find appropriate and accessible solutions that match their information support needs. We round out the issue out with a short review of Claire Fauset’s “Techno-fixes: a critical guide to climate change technologies” published in 2008 by Corporate Watch. And we close with a poignant poem by michelle (again in dual language). These international samplings represent just a tiny portion of the global discourse. We hope they warm your mind and hearts to further reflection and action.

Martyn & Toni

And for further reading, please consider:

Ursula K le Guin, *The Dispossessed*

Marge Piercy, *Woman on the Edge of Time*

Peter Kropotkin, *Fields, Factories and Workshops*

CONTRIBUTORS

Amber Burtis (MLIS) is an Assistant Professor and Health Sciences Librarian at Southern Illinois University in Carbondale, Illinois, USA. Her career has included

work in a number of library and non-profit settings where she has done outreach to American Indian, Hispanic and Appalachian communities. With an educational background in anthropology, ethnobotany, public health and library and information science, her interests lie in how individuals and cultures (from western health professionals to shamans and folk healers) conceptualize, create and use information related to health, medicine and science and the role librarians play in the lifecycle of knowledge production. She may be contacted by email at: aburtis@lib.siu.edu

Cheris A. Stallings-Carpenter received a Bachelor's of Science in Telecommunications from the University of Florida, USA and a Master's in Information Studies from Florida State University, USA. She is currently a PhD student at Walden University specializing in Public Health. She is also employed as a professional reference librarian in Lake City, Florida. She may be contacted by email at cheris.carpenter@gmail.com

Richard Hayman recently completed the MLIS program at the University of Alberta, and holds an MA in Comparative Literature, also from the U of A. His current research interests include the intersection of LIS, human rights, social movements, and information and communication technologies, with an emphasis on open source and open access. He plans to pursue a career in academic librarianship, and may be contacted by email at rhayman@gmail.com.

Andrew Hudson was formerly employed as a Librarian by the London Borough of Waltham Forest in the UK. Having taken early retirement, he is currently volunteering his time to environmental projects. He may be contacted by email at hudsona@live.co.uk

Martyn Lowe helped to found ISC. He calls himself a Pragmatic Anarchist, which he defines as an idealist who wants to work on real world solutions to real world problems.

michelle is a feminist and a member of the Spanish nonviolent anarchist movement. Since 1980, she has taken part in work by Amnesty International (Spain), Peace Brigades International (Guatemala, Nicaragua and Britain),

Movimiento de Objeción de Conciencia (Spain), War Resisters International (Britain), Greenham Common Women's Peace Camp (Britain), and Women in Black (Madrid and Belgrade). She has devoted over 20 years to translating for free for grassroots organizations. In 2006, however, she published her first (paid) translation (in book form) thanks to Protection International - a study of nonviolent action in countries at war. A second upcoming translation with the same group will be the "New Protection Manual for Human Rights Defenders." She has created and administered the sites Mujer Palabra at mujerpalabra.net and Talking People at talkingpeople.net, which count with many people's contributions. With Mujer Palabra, she published a collection of her own poems in 2003 (chapbook) and hopes to reprint it in book form in 2009. Every now and then she takes part in artistic activities set up in independent spaces, reading my poems and other writings. She may be contacted by email at: michelle@mujerpalabra.net

Scientific Utopias

Andrew Hudson

In dealing with scientific utopias a definition is needed so we are sure of what we are talking about. A scientific utopia is an ideal society that is produced through the aid of science. According to Wikipedia "these are set in the future, when it is believed that advanced science and technology will allow utopian living standards, the absence of death and suffering changes in human nature and the human condition. These utopian societies tend to change what to be "human" is all about. Technology has affected the way humans have lived to such an extent that normal functions, like sleeping, eating or even reproducing, have been replaced by artificial means. Other kinds of this utopia envisioned, include a society where humans have struck a balance with technology so that it is merely used to enhance the human living condition (e.g. Star Trek). In place of the static perfection of a utopia, libertarian transhumanists envision an "extropia", an open, evolving society allowing individuals and voluntary groupings to form the institutions and social forms they prefer."1 This effectively rules out utopias that are based largely on human institutions, where technology has not played a role. Moore differentiates between eutopic stories in which the society is in a different world and euchronic stories, which are set in the future. He argues that scientific utopias began when euchronic stories began to replace eutopic stories, although a future setting does not necessarily mean that it is a scientific utopia.2

My first reaction to the idea of scientific utopias is that there are numerous scientific dystopias, but very few utopias. The dystopias include George Orwell's 1984, Aldous Huxley's **Brave New World**, the film **Alphaville,** Ray Bradbury's **Fahrenheit 451** and numerous other stories. In the dystopias science assists in the process of making life unpleasant; they are not merely dystopias set in the future. The year 1984 has come and gone without Orwell's predictions being fulfilled, although there were parallels. Huxley, however, effectively introduced the term "Fordism" for the advent of mass production by its use as a replacement for the birth of Christ as a timescale.

In my teenage years, I held the view that science offered an idyllic future and was an avid reader of science fiction stories. I saw a future of peace and prosperity, space exploration, and atomic energy as the clean and cheap fuel of the future. Economic cycles of boom and bust belonged in the history books. Poverty and starvation would soon be a thing of the past and world government and an age of enlightenment when decisions were made by rational scientific planning lay in the not too distant future. This vision seems if anything further off.

One of the first scientific utopias is Sir Francis Bacon's **New Atlantis** which describes a society run by science and rationalism. Jules Verne's the **Floating Island** describes a micro-community of a self-propelled floating island equipped with electric power and all the latest inventions. It is a community restricted to the very well off and initially appears to be a perfect society. As with a lot of dystopic utopias, there is a strong element of satire and the island is destroyed by factions of equal strength being unable to agree on the course of the island.

H.G Wells was an advocate of world government and Fabian type planning. Although many of his works were pessimistic about the future, such as the **Time Machine** in which class distinction results in the human race evolving into two separate species (the Eloi and the Mortlocks) or continues as in his short story **a Story of the Days to Come**, he did write some scientific utopias. **Modern Utopia** is the best example. **The World Set Free** and the **Shape of Things** to come eventually result in a utopian society, but only after massive upheavals and wars. The utopia in **the Shape of Things to Come** only arrives through the Air Dictatorship and in **the World Set Free** after atomic warfare.

William Olaf Stapledon introduced the idea of a future utopia in his "future histories", **Last and First Men** and **Star Maker**. In the former, after many setbacks in which we are amongst the first men, the seventeenth to nineteenth men achieve a utopian society on Neptune and develop a form of collective mind that attempts to explore both the past and the universe. **Star Maker** is a history of the Universe and has been described as an atheist's creation story. However it is deistic rather than atheistic in that the central star maker creates numerous universes, but is not a personal interventionist god. At one stage of this universe, utopian societies start to evolve on several planets. However, they are not the only outcome of the application of technology. A number of insane

societies also evolve and attempt to impose their own order until the utopian worlds combine to defeat them. Ideas such as Dyson spheres (developed before Dyson invented the concept) and some of the ideas of J.D Bernal appear in the book. Stapleton denied that **Star Maker** was intended as science fiction, but it had a powerful influence on a lot of later science fiction writers and is well worth reading.

One writer influenced by Stapleton was Sir Arthur C. Clarke, whose first full length story the **City and the Stars** deals with a utopian society in which peoples' memories and genetic profiles are periodically stored in computers for regeneration. The story deals with the problem of dissidence and stagnation through the principal character Alvin, who has been programmed to prevent the communities of Lys and Diaspar from ossifying and he reunites them. Clarke also deals with a utopian society in **Childhood's End,** this time being imposed from without by the Overlords whose domination brings about a golden age of peace and prosperity. However, it is a preliminary to humans becoming part of a galactic overmind and not an end it itself.

Whilst Wells held a belief that if only the human race behaved like rational Fabians everything would work out all right, Clarke held the view that electronic intelligence would eventually take over and was the next stage of evolution.2 This latter view is by no means restricted to Clarke. J.D Bernal suggested that eventually the mind would be the only thing left of human beings.3 The change is not always dystopic, as in Clarke's Hal in **2001. I**n **Time Ships**, Stephen Baxter carried on the story of Wells' time traveller and envisioned a future in which robots maintained a benevolent control of humans. The idea of benevolent robots trying to seize power in a coup is developed in the film **I Robot** which bears little relation to Asimov's original robot stories, but is more an amalgam of several of his robot stories. The portrayal of the detective by Will Smith is one of the few things that does not conflict with the original story; although the reader assumes the detective is a white man, there is no actual description of the person's race in the book!

A lot of science fiction was not concerned with utopias and continued the cycles or empires and wars into space. Both Asimov's Foundation series and James Blish's Cities in Flight series are effectively cosmic versions of the decline and fall of the Roman Empire. Blish, however, does develop the idea of the Machiavellian city state in the form of trading cities that travel through space.

New York is run by the City Fathers that are a bank of computers, however society is far from ideal and they order the shooting a city manager who risks the cities finances. There is also the rogue city turned criminal in the Interstellar Master Traders.

Utopia is a perfect society and presents problems in Blish's novella **Case of Conscience.** Blish deals with an apparently perfect society on the planet Lithia. Peace logic and understanding are obtained without any deity. The principal character, a Jesuit priest, comes to the conclusion that this is too good to be true and that the planet has been created by the devil.

The problems presented by utopias are achieving them, boredom, dissent, and regeneration. Achieving utopia may well be impossible, in which case the other problems are irrelevant - although arguably they are factors that prevent achievement.

Several fictional utopias have been produced by force as in the case of **the World Set Free** and **the Shape of Things to Come**. Other stories involve the concept of an individual using advanced technology to bring about change, as in the case of Jules Verne's **Robor the Conqueror** - who attempts to end wars with his flying machine and bombs but fails. The idea of a super weapon or campaign of terror that will change the world is not new. Alfred Nobel invented dynamite in the hopes that its effects would be so terrible that countries would no longer go to war. John Holland was an Irish Nationalist who emigrated to New York and designed submarines in the hopes of challenging the might of the Royal Navy, rather akin to Jules Verne's Captain Nemo who turns out to be an Indian Nationalist in the sequel to **20,000 Leagues Under the Sea, the Mysterious Island**. Holland's design was eventually bought by the United States Navy and sold to Britain to be used in the Royal Navy's first submarines.

A Utopia achieved by force would almost certainly require force to be maintained and therefore would not be an ideal society. The danger lies in the efforts to enforce the utopia being worse than the conditions that existed beforehand - as dystopias acknowledge. In **the Shape of Things to Come,** the Socratic solution of poison is offered to opponents. Forgetting dissidence, there is always the problem of boredom in any ideal society. The exploration of space offers one possible solution and of those parts of the earth still unexplored. Stapledon has the collective mind exploring the universe and the past. Dealing with dissidence is another problem. In **Brave New World** dissidents are exiled

to Iceland. Channelling dissidence into productive channels is a challenge for any Utopia, as is the prevention of stagnation.

The biggest problem with scientific utopias is that they necessitate changes in human behaviour as well. And it is unlikely that scientific and technological changes will in themselves bring this about.

Over the past thirty years, there has been a growing belief that far from offering solutions to social problems, science is the cause of problems - particularly environmental ones. This is a dangerous delusion; it is not science that has created the problems, but the application of science. Human beings started to affect the environment towards the end of the Mesolithic, with the clearing of large areas of woodland for hunting and farming using the Stone Age technology of stone axes and controlled burning. This probably has had as great an impact on the environment as any recent technological development. In large parts of the world, the natural environment ceased to exist around 3000BC. There is no scientific consensus on the reason for the extinction of Neanderthal man and other species of the genus homo, but some theories place the cause as extermination by Homo Sapiens. If this is correct, the horrors of mass extermination do not require modern weapons. Genghis Khan managed without sophisticated weapons.

A variation on the scientific utopia theory that has become a cult book is **Ectopia.** It is set in an ecologist's paradise. Science is not the problem and there is no future in mystical mother earth mumbo jumbo which takes people back into the age before religions, such as Christianity. Ideas of earth and soil are found in the ideology of fascism. That is not to suggest that we should not develop renewable energy and sustainable technologies. But they require the development of technology. The world's population cannot be sustained on Stone Age technology. Not can we exist in an agricultural William Morris type pre mass industry economy, as described in **News from Nowhere**. There are amongst environmentalists some neo-Malthusians who call for a cull of the world's human population, including the late William Vogt. This cure is worse than the disease. Obviously there has to be a finite limit to the size of population that the planet can sustain, but there is no agreed size of it and it is dangerous to talk of ceilings. Whilst Malthus might have been correct in stating that there was a limit to the population that could be sustained, his essays advocated a political agenda that supported political economy and was used to justify concept

of the worthy and unworthy poor and engender a belief that the poor were largely feckless. This was used to bring in the workhouses and introduce the regimentation required for a mass production economy.4

Pure science is neutral , but its application is not and it should not be the slave to corporate interests. Science itself can be employed by the forces of reaction and is not necessarily on the side of progress, as Orwell warns in his essay "Wells Utopia and the World State".5 J.D Bernal effectively argues for an elitist government through scientific elite, not entirely dissimilar from the scenario in **Brave New World.** But he suggests that in a capitalistic state, a powerful independent scientific corporation would not be allowed to become wealthy and powerful..6 Sir Arthur C Clarke wrote a short story called **I Remember Babylon** in which a producer blacklisted in the McCarthy era plans to indoctrinate the world through Soviet Television satellites. Ironically, the vision came true. But it was not communism that was promoted, but capitalism through satellite TV. Information technology lies at the crux of the issue. Is it to be used for Google to spy on us? Or could its potential be developed for economic planning, so that the inefficiencies of planned economies become a thing of the past? And maybe a Wellsian type rational society can be feasible and not a utopian dream. The idea that electronic intelligence will take over as in Warwick Deepings **Computer One** as yet has no foundation. There are, however, dangers of computers effectively taking charge by default through over reliance on IT systems. Currently this scenario is beginning to develop through the robotic use target culture that has been foisted on the public services by new labour, where what was intended as a means to an end has often become an end in itself. This produces a meaningless set of statistics which people treat with scepticism whenever there is an example of a problem in a public service that affects them. It is effectively a form of **Alphaville.**

Science offers a means by which a utopia might be feasible, but it relies in the application of social sciences through democratic control to ensure that it is attained and that science is not employed for perverted ends.

1. http://en.wikipedia.org/wiki/Utopia

2. Manuel, Frank Edward **Utopias and Utopian thought** Boston Houghton and Miflin1966

2. Clarke Sir Arthur C **Profiles of the Future** Ch18 p193-206 Millennium edition Indigo 1999

3. Bernal J.D **The World the Flesh and the Devil Jonathan Cape 1970** First published 1929

4. Wilson, Ben **Decency and Disorder: The age of cant 1789-1837** Faber and Faber 2007

5. Orwell, George "**Wells Utopia and the World State"** in Orwell, George **Collected Essays** Secker and Warburg 1961

6. Bernal J.D **The World the Flesh and the Devil**

FURTHER READING

Asimov, Isaac

Caves of Earth

I robot

Naked Sun

Baxter, Stephen

The Time Ships

Blish, James

A case of conscience

Clash of Cymbals

A life for the stars

They shall have stars

Earthman come home

Bradbury, Ray

Fahrenheit 451

Clarke, Sir Arthur C.

Childhood's End

I remember Babylon (short story)

The City and the Stars

Deeping, Warwick

Computer One

Huxley, Aldous

Brave New World

The Island

Karp, David

One

Morris, William

News from Nowhere

Stapledon, W Olaf

Last and First men

Last Men in London

Star Maker

Verne, Jules

Robur the Conqueror

Master of the Air

Propellor Island

Wells, H.G

A Story of the Days to come (novella)

Shape of Things to Come

The Time machine

World Set Free

Managing Indigenous Knowledge And Traditional Cultural Expressions: Is Technology The Solution?

Amber Burtis

ABSTRACT

This paper discusses current issues surrounding the management of indigenous knowledge (IK) and traditional cultural expressions (TCEs) in libraries, archives and other cultural institutions. It addresses the need for: (1) ethical policies for the management of these knowledge systems, (2) critical approaches to the dominant library paradigm of information management, (3) recent efforts by the World Intellectual Property Organization and the American Library Association to craft policy on this topic, and (4) the need for and examples of collaboration with indigenous communities. Implications for social change with the implementation of socially responsible management systems are also considered.

INTRODUCTION

Even as globalization opens up more opportunities for worldwide democratic participation in the information society, the digital divide continues to grow larger for the cultural groups that have already benefited the least from the development of information and communication technologies (Appadurai, 1998, cited in Srinivasan, 2006). While this paper will specifically consider indigenous communities, the discussion is also relevant to other communities that are disadvantaged.

At least in the United States, the library and information science (LIS) profession subscribes to the idea of technological utopianism, or that technology

will lead to the creation of a perfect society (Segal, 2005). This progression toward a utopian society will include the cataloging of all information that is pertinent to the promotion of scientific and technological development. I argue that a movement toward a utopian information society would not be of equal benefit to all members of our global society. Collective ownership of the world's knowledge would continue to disadvantage those who have already been exploited by dominant world powers. Of concern is the unequal relationship between those who control global information systems (i.e., corporations, publishers, IT developers, libraries, archives, etc.) and those in less empowered positions who are the subject or creators of a part of this information.

With the creation of a global information society, and the collection and storage of information related to it, has come the increased opportunity for misuse and misappropriation of indigenous knowledge (IK) and indigenous peoples' traditional cultural expressions (TCEs). National policy ensuring proper handling of IK and TCEs would likely be the most effective approach to addressing these issues. Since such policies have not yet been implemented, LIS professionals must take it upon themselves to address this issue.

INDIGENOUS KNOWLEDGE AND CULTURAL EXPRESSION

IK refers to the knowledge, innovations, and practices of indigenous groups in matters related to agriculture and environmental management, medicine and health, art and language. Traditional cultural expressions (TCEs) are also part of IK. Like IK, TCEs have been passed from one generation to the next (orally or by tradition) and are an integral part of a culture's identity and heritage. These expressions include, but are not limited to: music and song, stories, symbols, dances, rituals, architecture, arts, and crafts (Franklin, 2008). Both IK and TCEs are found in libraries as original artifacts but are just as likely to take the form of audio and video recordings, photographs, and as textual descriptions of expressions (i.e., song, dance, stories).

Since the 1980s, indigenous knowledge (IK) has been a topic of discussion among scholars of anthropology, geography and disciplines related to development studies. Today there is broadening interest from a variety of fields: ecology, soil science, health, medicine, botany, water resource management and

many more. The interest is driven by research into sustainable development practices in developing countries and the scientific community's concern over loss of species and ecosystems (Nakata, 2002). The LIS field has only recently taken note of this important topic of concern.

IK and TCEs are represented in library and archival collections, but often LIS professionals make no attempt to put them into a cultural context. In support of intellectual freedom, we skillfully catalog, digitize and display information so that the public can access it. A noble goal, but as Wendland (2008) notes:

> "…indigenous claims for greater protection of indigenous knowledge systems and cultural materials lie, albeit perhaps only superficially, at right-angles to some of the core objectives of libraries and other information services, such as: freedom of speech, intellectual freedom, diffusion of knowledge, research and learning, access to information, and preservation of cultural heritage" (p. 2).

For indigenous communities, IK and TCEs are not "things" that exist separately from their culture. The discord with LIS systems lies in the orientation of the field toward a scientific logic of 'information retrieval' and 'information access.' In this discourse, knowledge becomes information, divorced from the context in which it was created (Pyati, 2006). This process allows indigenous cultural capital to be commodified in the name of intellectual freedom.

THE RESPONSE TO IK AND TCEs MANAGEMENT CONCERNS

The World Intellectual Property Organization (WIPO) is one of the leading authorities on IK and TCEs. The organization is a specialized agency of the United Nations and acts as forum for policy debate regarding international intellectual property (World Intellectual Property Organization, 2009). In 2000, the WIPO created an intergovernmental committee to consider legal protection of TCEs, IK and genetic resources. In response to the committee's work, the American Library Association (ALA) Office of Information Technology Policy (OITP) (2009) has stated that:

> "The committee's work is gaining momentum within WIPO and its member states. International treaty decisions made at WIPO may have a negative impact on the library's mission to provide access to and preserve the cultural heritage. ALA must be prepared with a position on the management and protection of TCE in the hope of influencing the WIPO discussions in the best interests of libraries and the public, including traditional cultures."

In the United States, the ALA has come to the table fairly late in the game. Australia, particularly, and a number of other countries have clearly been working on the issue for some time (see Nakata and Langton, 2005). The OITP was founded in 1995, with the mission to "advocate for public policy that supports and encourages the efforts of libraries to ensure access to electronic information resources as a means of upholding the public's right to a free and open information society" (American Library Association Office for Information Technology Policy, 2009c). The OITP has taken on the responsibility of advocating for policy related to IK and TCEs, and, some might argue, taken a cautious approach to this issue. Notice the language in the following statement from the OITP's website (2009a) (emphasis added):

> "*Some fear* that opening TCEs to the world creates the risk that the work may be misused or misappropriated, threatening cultural identity by dishonoring the original meaning and value of the cultural work. The management and protection of traditional cultural expression is a long-standing issue that is greatly magnified by the digital environment. Digital technologies and the Internet elevate the discovery of and access to cultural works to a potential world audience. TCEs can be easily modified without authorization and then further distributed by digital technologies and networks. Increasingly, libraries collect, store, make available, preserve and digitize cultural works without a clear policy position on how TCEs should be managed or protected. *This is an area in which library values can conflict with the interests of traditional cultures, making policy decisions difficult*."

In November 2008, the OITP convened the conference: *Cultural Heritage and Living Culture: Defining the U.S. Library Position on Access and Protection of*

Traditional Cultural Expression. The office then drafted a principles statement, which will serve to direct the ALA's position with regard to the WIPO, entitled: *Librarianship and Traditional Cultural Expressions: Nurturing Understanding and Respect* (American Library Association Office for Information Technology Policy, 2009b).

The statement, which has not yet been approved as ALA policy, is still open for comments (post comments at http://wo.ala.org/tce/). Developed in collaboration with librarians, archivists and indigenous communities in the United States, the document summarizes five key concepts in the management of TCEs:

- Meaning and Social Context
- Respect, Recognition, Understanding
- Responsibility
- Reciprocity and Collaboration
- Stewardship

These concepts will also frame the following discussion on ideas for collaborative management of IK and TCEs.

POSSIBLE SOLUTIONS

LIS professionals must first seek to understand the context in which IK and TCEs came to be in their collections. In general, indigenous cultures have been oppressed and exploited under colonial rule. Display of cultural expressions (i.e., language, ceremony) was often suppressed and punished by the ruling power. For this reason, libraries may have materials that would, for instance, be important to a group attempting to revitalize their language.

> As Nakata (2002) points out:
> "The documentation of such knowledge by scientists, the storage of information in databases in academic institutions, whether they be gene banks or electronic networks, all looks remarkably similar to former

> colonial enterprises which co-opted land, resources, and labour in the interest of their own prosperity through trade and value-adding" (p. 282).

A rare recording of an endangered language may be of great value to a university library (by increasing research opportunities and the institution's prestige), but the value of this "document" to the group who is in danger of losing their language would be much greater. When libraries shift from seeing themselves as the owners of these materials, and instead as caretakers, a dialogue can begin between LIS professionals and indigenous communities.

Part of this dialogue must also include a conversation about sensitive materials (sacred information related to spirituality or religion, or private information meant for a certain gender, age or social group within the culture). Providing public access could disrespect the values and norms associated with these types of materials (American Library Association Office of Information Technology Policy, 2009b). The two main approaches to collaboration which are being seen include: (1) working with indigenous communities to develop policies for preservation, access, and repatriation of materials (especially sensitive materials) and (2) using indigenous community participation to inform the development of electronic information systems. As the first approach has been discussed in length elsewhere (see Underhill, 2006; Nakata et al, 2008), the following section will focus on the second approach to collaboration by highlighting examples of collaborative work being done in both libraries and museums.

COLLABORATIVE APPROACHES

Technology has allowed some indigenous groups the opportunity to create their own cultural narrative in the digital world, but as discussed earlier, the digital divide is still wide enough that many do not have this opportunity. Furthermore, since technology has contributed to the degradation of indigenous cultures, we should ask if it makes sense to use technology as a solution to the problem of indigenous peoples' loss of intellectual property rights. Should indigenous communities be part of the process of designing, implementing, and

evaluating information systems which provide access to IK and TCEs? Can indigenous people trust the developers of these information systems?

A recent trend in the scientific community is to create IK databases. In reference to these databases, Gosart (2009) states that: "While composed with assistance and help from the indigenous peoples, these information resources often bore little relevance to the needs of the communities from whom the information was taken" (p. 2). This observation points to the need for a better and clearer understanding of the needs of the community in question.

Another approach, which does make use of community goals, is the community-driven ontology approach to database creation and population (i.e., metadata related to description and rights and tribal care annotations to digital images, video or 3D representations). An ontology is a conceptual map of the world according to a specific culture. When a community organizes its own content in accordance with its own culturally specific ontology, the project becomes much more relevant to the people involved (Srinivasan, 2004).

Examples of current projects related to IK and TCEs, some of which make use of community-driven ontologies include:

- Two multimedia projects (*Village Voice and Tribal Diaspora)* initiated by a professor in the Department of Information Studies at the University of California – Los Angeles. Both projects use a community-driven ontology for the knowledge architecture of the database which manages the narratives of various communities (i.e., Somali Americans and American Indians) (Srinivasan, 2004).

- Database software to support a program at the Smithsonian Institute's National Museum of the American Indian (*Culturally Sensitive Collections Care Program*). It allows for indigenous rights annotations and community-driven ontologies. The designers aim to use the software in collaborations between museums, archives and indigenous communities to facilitate cultural repatriation. Software will be downloadable and freely available to indigenous communities (Hunter, J., et al., 2004).

- *Ara Irititja Project* (a project supported by the South Australian Museum). The project partners with local Aboriginal organizations to collect and

preserve both traditional and current Anangu material and stories. Through an interactive multi-media archive database, the materials are then "given back to the community" (Ara Irititja Project, 2009).

- *The Archive of the Indigenous Languages of Latin America* (a joint project of the Departments of Anthropology and Linguistics and the Digital Library Services Division of the University Libraries at the University of Texas at Austin). The archive preserves and makes accessible narratives, ceremonies, oratory, conversations, and songs in the indigenous languages of Latin America and is especially concerned with making the collection accessible to indigenous communities and asks for users to register and agree to terms and conditions concerned with intellectual property rights (Archive of the Indigenous Languages of Latin America, 2009).

CONCLUSION

In the United States, the LIS profession has been preoccupied with collecting, preserving, and providing access to materials, and has done little to challenge the assumption that this approach is the most appropriate for all information. Should the profession move from its traditional role as owner of collections, and accept the role of caretaker, then important steps can be taken toward the ethical management of IK and TCEs (including repatriation and the proper handling of sensitive materials). Collaboration with indigenous communities is integral to this process. Merely being a librarian or an archivist who manages indigenous materials is no longer acceptable, the LIS profession must work to facilitate a process that involves indigenous communities in the planning and implementation of appropriate and useful knowledge management systems.

It's Not Utopia, But Lifestyle Now

Musings by Martyn Lowe

Lifestyle is the key to a better tomorrow. No matter just how much of an ideal world we might all wish to live in, we will achieve nothing unless we consider what kind of lifestyle we lead. Much of what are considered to be utopian ideals are really only things which make for good practical common sense. I write here about what I hope to do, or hope to achieve, and that it might have a positive impact and help to create a better world. The good thing is that these are measures which we can all undertake right here and now. I present a few here below:

Recycling and Current Energy Usage: Perhaps one of the most lasting dreams about any Utopian society is that it should be full of both useful and beautiful objects (e.g., objects made out of natural and non-polluting materials, objects which are both functional and pleasing to the eye). Unfortunately, we have not managed to achieve that wonderful state of affairs, but at least we can do something about the waste of materials which surround us all now. Paper, glass, batteries, and compost materials are just a few of these. This is not to say that we will not have to recycle materials 'after the revolution'; just that it will not be a major problem if we apply a little forethought and some good design. In the meantime, we can all look to cutting down the amount of materials and energy which we waste. Energy saving light bulbs may be wonderful in terms of reducing energy usage, but it is better to use only such lighting as one really needs.

Good Quality, Good Environmental Impact. There is an old saying: 'You get what you pay for'. Call it good quality, or just good design, but they are both key factors in making objects which last a long time. It' is the difference between buying something which is cheap to purchase, but lasts just a year or two, or spending more money on a more expensive item which will last decades. Well made and well designed equate to low environmental impact. This in turn must equate to moving away from all of the values of a throw-away society, and

the kind of 'must have it now' short term economic thinking which has ruined the kind of societies which we all have to live in now.

Walking and Public Transport. Cities are for people. Cities are ideal places for walking, public transport (e.g. trams), and bike routes. For long distance trips there are the railways. Canals and rivers are ideal for the movement of goods.

Vegetarianism. There are many good reasons why one should become vegetarian, but most of the ones which people talk about are to do with improving one's health and stopping the exploitation or cruelty to animals. Historically, the eating of meat has been a luxury and it still so in most parts of the world. Fishing is destroying the world's oceans - and is totally unnecessary .Grow local and impact global. The environmental benefits from vegetarianism are very great indeed. But they can only achieve a major impact in conjunction with growing our own food locally.

Wind Power & Solar Energy. Many of our long term environmental problems may only be solved by energy conservation and the use of alternative energy. This all comes down to the use of the following measures: Better building, insulation - triple glazing, us solar energy, and widespread use of wind turbines. For further information on the development of wind turbines, see: www.windpower.dk

In closing though, none of the above ideas are in any way difficult to achieve. Yet, in combination, they can help to bring about the kind of utopian world we might all like to live in. And while there might not be one technological fix to saving the planet, there are certainly a number of such progressive projects which are working towards making it a better place. None of the following project resources hold all of the solutions as to how we might build ourselves a utopian world, but they do show just what kind of Utopian's world we might all be able to build ourselves.

Airships are a practical alternative way of transporting heavy goods and carrying people around. See: http://en.wikipedia.org/wiki/Airship

Carbusters is a 32-page print magazine critiquing our society's car culture and exploring positive transport alternatives. See: http://www.carbusters.org/index.php

The Centre for Alternative Technology was founded in 1973, and is based in a former slate quarry in mid Wales. The role of the Centre is to explore and

demonstrate a wide range of alternatives, while communicating to other people the options for them to achieve positive change in their own lives. If you get a chance then you should try and visit the Centre. See: http://www.cat.org.uk

Marine Current Turbines has developed a tidal turbine technology to exploit currents in the seas, whether they are driven by the tides or by oceanic circulations. This is some of the coolest technology that I have ever come across! See: http://www.marineturbines.com/

Organic Food. Garden Organic is a K charity for organic growing. The charity explores how we might grow food in a more sustainable manner: both on the farm and in our gardens. See: http://www.gardenorganic.org.uk/index.php

Practical Action is a charity which works with poor communities to develop appropriate technologies. See: www.itdg.org

Scientists for Global Responsibilities promotes ethical science, design and technology, based on the principles of openness, accountability, peace, social justice, and environmental sustainability. See: http://www.sgr.org.uk/

Scottish Ecological Design Association was set up in 1991 'to promote the design of communities, environments, projects, systems, services, materials and products which enhance the quality of life , and are not harmful to, living species and planetary ecology'. See: http://www.seda2.org/

Vegfam is a charity which promotes the growth of trees within developing countries. (Trees which help to provide both food and combat the effects of climate change.) VEGFAM helps people overseas by providing funds for self-supporting, sustainable food projects and the provision of safe drinking water. See: http://www.vegfamcharity.org.uk/

Wind Power Works is a website which provides information about various wind turbine projects throughout the world. See: http://www.windpowerworks.net/

Digital Dystopia: Overcoming Digital Deprivation In The United States

Cheris Carpenter

ABSTRACT

Public libraries serve increasingly critical roles in the knowledge society. For example, currently public libraries are integral to their communities because of the institutional provision of free public Internet access. Libraries have become technology centers where critical information services are offered to their communities. This is an analysis of the greater potentiality public libraries possess in bridging the 'digital divide' in the United States. An examination of the ways in which networked services can aid people in disadvantaged communities is provided, as well an exploration of the coordinated efforts of local municipalities and public libraries in the provision of public Internet access. The predominate statistics used were produced by the Pew Research Center's Internet and American Life Project 2008 study of US Broadband Penetration and the 2007 report *"Public Libraries and the Internet"* for the American Library Association (ALA) by Florida State University, which analyzed the impact of Internet-based services by public libraries in their communities. The PEW Center is an independent a non-partisan research group that studies attitudes toward the press, politics and public policy issues that provides information on the issues, attitudes and trends shaping America and the world.

DIGITAL DEPRIVATION

Recent rapid technological and economic changes have resulted in digital exclusion for large segments of American society. As everyday life transitions towards the pervasive use of the Internet and other networked services, a digital information gap has developed with detrimental consequences for socially excluded groups in the United States. [Dutch and Muddiman, 2000] The definitions of socially excluded groups include minorities, poor, undereducated or

digitally illiterate, and/or disabled peoples who have little or no access to online-networked services and who are otherwise the most at-risk and hard-to-reach groups in society. Two common terms, which have evolved from the late 1990s in the contest of the digital information gap, are the "information haves and information have-nots". [Fourie, 2007] These terms have grown to encompass a broader set of ideas now called 'social inclusion' and 'social exclusion'.

Social inclusion refers to all attempts to promote equity among socially excluded groups. [Boushey, 2007] Social inclusion simultaneously incorporates multiple dimensions of well-being and exists when all individuals have the opportunity and resources necessary to participate fully in economic, social, and cultural activities considered the societal norm. [Boushey, 2007] Social exclusion is commonly associated with poverty, but actually encompasses much more; it occurs when people or places suffer from a combination of problems such as unemployment, depressed housing markets, discrimination, illiteracy, and poor health or disability. [Fourie, 2007] These problems often accumulate to become an exclusion from basic information resources and opportunities. Individuals as well as groups make up the categories of excluded people, and a public library may need to be prepared to address the social exclusion of a few individuals in their community or large segments of individuals in their overall community. [Fourie, 2007]

These concepts are inextricably associated with another concept derived from the term 'digital divide', called 'digital deprivation'. Digital deprivation enhances social exclusion and creates perilous cycles of social alienation. For example, an individual who is poor and unemployed will find it far more difficult to become digitally literate. The unavoidable result will be the denial of access to a series of employment positions, which require IT knowledge. This ultimately reduces the individuals' possibilities of finding a job, and inevitably increases their degree of social exclusion.

DIGITAL DIVIDE 2.0

Digital deprivation in relation to broadband access creates a paradigm of inequality for people who are unable to connect to broadband and networked services and are consequently incapable of acquiring the skills necessary to function in a digital society. Such unequal access to computers, electronic networks, telecommunications services, or information based on demographic or

socio-economic factors such as income, race, gender, age, or location has become popularly known as a "digital divide." [Dutch and Muddiman, 2000]

Cheap, ubiquitous high-speed Internet access promises to accelerate economic growth, create new jobs and industries, advance education and lifelong learning, improve health care decision-making, and raise the standard of living. However, cost prohibitive monthly fees and surcharges for broadband remain the principal obstacle to universal broadband connectivity to the Internet. For tens of millions of families broadband is simply too expensive, where the average US family with high-speed access boasts an annual income of $72,000. [PEW, 2008] Statistical measurements of broadband penetration indicated stark disparities in race, income and education. [PEW, 2008] Poor infrastructure in rural or central city areas due to geographic limitations is insufficient in explaining all of these disparities, because they persist among racial, income, and educational groups residing in areas of similar population density. [PEW, 2008] The implication being that although including geographic limitations to the digital divide spectrum is relevant it is still primarily contingent upon income and demographics.

U.S. GOVERNMENT
TURNING A BLIND EYE?

The 1996 Telecommunication Act required the US Federal Communications Commission to adopt policies for the advancement of universal service in all U.S. regions, and for access to service for consumers in all income groups "at just, reasonable, and affordable rates." [Jacobsen, 2004] But, despite its statutory mandates to ensure universal telecommunications service at affordable rates, the FCC has rejected universal broadband access as an ideal and has excluded broadband from the "basket of services [that are] eligible for federal universal service support." [Jacobsen, 2004] Critics of the FCC have pointed out that it has failed to carry out its responsibility under the 1996 Act to ensure that "advanced telecommunications services" are provided throughout the United States, including to "low-income" consumers and those in "rural, insular, and high cost areas." [Travis, 2006]

Since 2004, while documenting the exclusion of millions of Americans from the opportunities made available by the Internet, the Bush administration has repeatedly downplayed the importance of the digital divide as a concept and the Commerce Department stopped using the term entirely in its reports on

Internet access. [Travis, 2006] Oddly, the Commerce Department has also failed to update the Clinton administration's annual reports on the digital divide called "Falling through the Net." In a glaring display of self-contradictory analysis, the then FCC Chairman Michael Powell called the "digital divide" "a dangerous phrase" that could lead to "government entitlement programs that guaranteed poor people cheaper access to new technology, like . . . Mercedes Benz." Chairman Powell's statement effectively minimized the divide in access to the Internet by comparing it to the gap in ownership of luxury cars. [Travis, 2006]

For the past four years, the continued lack of commitment by the U.S. government to subsidize universal broadband access to poor and underserved Americans has imposed high social and economic costs. As much as $1 trillion in economic growth was delayed due to structural and legal limitations on U.S. broadband access. [Travis, 2006] The result has been poor and underserved Americans being unable to participate in the estimated $1 trillion market for electronic commerce conducted over the Internet. Many people in households without broadband are denied the opportunity to leverage the Internet's wealth of resources, while families without broadband continue to struggle to become "active and informed participant[s] in society". [Travis, 2006] There several critical services public Internet access provides which aid individuals in disadvantaged communities. [Weingarten, 2007] The range of online information services includes:

- E-Government: the role of e-government has presented public libraries with opportunities to engage local political leaders in the debate over the growing importance of the public library as community technology centers. [Weingarten, 2007]

- Emergency Response: as evidenced by a Florida State University research team studying the response of libraries after Hurricane Katrina in the Gulf Coast, uncovered startling information about librarians and policy-makers, who view public libraries as locations where individuals can go for emergency services. [Weingarten, 2007]

- E-Learning: education including distance education, tutoring, after-school education, and home-schooling education

- New employment opportunities for those who develop IT skills

- Access to online banking
- Online shopping
- Online health services
- Online government dissemination of information and simplification of the process of dealing with large bureaucratic governmental institutions [Weingarten, 2007]

BROADBAND TECHNOLOGIES
AT-A-GLANCE

A variety of broadband technologies can deliver broadband service to underserved communities in both large urban areas and sparsely populated rural areas. For instance, Cable Modem service allows consumers to connect to the Internet via the same coaxial cable that provides cable television. Similarly, Digital Subscriber Line, or DSL, is a wire line technology that transmits data over traditional copper telephone lines. The transmission speed is dependent upon the amount of data speed the subscriber is willing to purchase. [Reeve, 2007] Fiber optics is another promising technology that converts data into light and transmits that light through glass fibers. Though this technology holds great potential, it is more cost-prohibitive than either cable modem or DSL. [Reeve, 2007]

Wireless broadband connects consumers to the Internet through radio frequency networks between the consumer's location and the service provider's facility. [Reeve, 2007] Wireless service can be either 'mobile' or 'fixed' at a 'hotspot' location and is a technology commonly used in libraries, airports or coffee shops. Short-range wireless devices typically use wireless fidelity or Wi-Fi with connection speed of up to 54Mbps used in conjunction with a wired broadband technology such as cable or DSL. Wireless technologies, which utilize long-range equipment, such as WiMAX, can provide broadband service in remote and sparsely populated areas.

WiMAX is an emerging technology that provides high-speed mobile data and telecommunication services. WiMAX stands for Worldwide Interoperability for Microwave Access and it operates on IEEE 802.16 standards. [IEEE, 2006] The IEEE Standards Association (IEEE-SA) is a globally recognized developer of industry standards in a broad-range of telecommunications industries and is

considered the central source for standardization in a broad range of emerging technologies. WiMAX operates same way as Wi-Fi, but it is more sophisticated and efficient. WiMAX provides higher speed connection up to 70 Mbps over an area of up to 30 miles and it is capable of routing data to standard Wi-Fi devices. [Travis, 2006] This wireless technology holds the most promise for rural areas because the expense of installing hardwires to deliver broadband service is impractical and costly. [Jacobsen, 2004]

Another burgeoning area of interest in wireless technology has been the use of Wireless LANs in public libraries. Wireless LANs stands for 'wireless local area network' and this technology makes it possible for a desktop, notebook, or PC to access a local area network without a physical connection. Interest in Wireless LANs has grown exponentially since the technology became available in 2001. By mid-2008, over two-thirds of US public libraries had a wireless LAN or a hybrid LANs system [Boss, 2006]. The typical wireless LAN involves the installation of access points in the walls and ceilings of a building. The access points are usually the size of a small book and house a transmitter, receiver, antennae, and a device that bridges the LAN to an organization's wire-based network. [IEEE, 2006] A popular application of wireless LANs in libraries has been the lending of laptops to patrons for their use throughout the building.

THE "INFRASTRUCTURE PLATEAU"

A study conducted in 2007 by a team of research librarians at Florida State University entitled, the *Public Libraries and the Internet* surveyed public libraries across the United States based on three library demographics. The demographics used were based on 'metropolitan status' (equating to urban or rural populations), 'poverty level of their service population' (using US census data), and 'the state in which they resided'. [McClure, 2007] The 2007 study sampled 6,979 public libraries, and received 4,027 responses for 57.7 percent response rate. [McClure, 2007]

Data in the study indicated that free public Internet access continues to grow in public libraries. [Bertot, 2007] Among the key findings:

- 99.7% of public library branches are connected to the Internet;
- 99.1% of public library branches offer public Internet access;
- 54.2% of public library branches offer wireless Internet access, a dramatic increase from 36.7% in 2006;

- 100% of urban library branches are connected to the Internet; and,
- Public library branches have an average of 10.7 public access workstations, with rural libraries having an average of 7.1 workstations and high poverty libraries — that are usually associated with large urban public library systems — having 25.4 workstations. [McClure, 2007]

The provision of free Internet access by public libraries in the United States has transformed them into technology centers for communities, patrons, and local governments. This has resulted in a majority of poor and low-income people who solely depend upon its availability.

The findings of the 2007 study indicated a high success rate of public libraries providing Internet access to their communities. However, the study also illuminated a troubling new trend that seemed to be emerging: an 'infrastructure plateau' that will restrict the ability of public libraries to meet the increasing demands of providing Internet access. The concept of an 'infrastructure plateau' was derived from data related to a variety of factors in the 2007 study: physical space, number of workstations, funding, telecommunications infrastructure and speed of connectivity. [McClure, 2007] The variables were measured to the point at which they are static, decreasing, or indicating a future decrease. [McClure, 2007] The overall trend of the study suggested that there was an increased likelihood for public libraries to reach or exceed capacity in their provision of free public Internet access. This was attributed to the high connection speeds required for Web 2.0 technologies that demand large amounts of bandwidth to operate digital media applications.

Questions in the 2007 survey also included a broad range of issues that assessed the ability of public library infrastructure to provide public access Internet and computing services. The answers appeared to indicate that public libraries have reached a plateau along the most basic infrastructure measures of Internet workstations and bandwidth. [McClure, 2007] Statistical analysis from the FSU study also indicated that bandwidth speeds have decreased slightly since 2006, while the average number of computer workstations has remained constant since 2002. The study found that 75 percent of public librarian respondents indicated that their libraries were the only source for free public Internet access for their communities. This implies that while demand for public

library computers and connection speeds continues to increase, the quality of Internet services is likely to diminish. [McClure, 2007]

One area where there has been no indication of plateau is wireless Internet access. The number of libraries offering public wireless access increased from 36.7 percent to 54.2 percent in 2007. [McClure, 2007] This seems to indicate libraries are using wireless as an alternative to adding workstations and investing their already limited funds in overhauling their telecommunications infrastructure. Some libraries have been able to tailor their funding to target the 'Infrastructure Plateau' with limited resources. For example, in the public library district of Alachua County Florida, their libraries allow patrons to "checkout" laptops for a set amount of time. The Alachua County district libraries had limited space and funds, but desperately needed to add more computer workstations to their facilities. Their libraries had a strong IT infrastructure in their facilities, but they were stymied over how to provide additional Internet workstations. [MaintainIT, 2008] Using a grant from the Melinda and Bill Gates Foundation the district purchased laptops with three-year accidental damage coverage warranties. The library district administration then implemented policies and security equipment designed to secure the laptops and reduce maintenance hassles. [MaintainIT, 2008] This was an innovative means of utilizing a wireless LAN to increase the number of available PCs during busy periods without installation of a large amount of data jacks. [MaintainIT, 2008] Their system also offered the flexibility of configuration of the laptops to operate with integrated library system and other networked services. [MaintainIT, 2008]

Other findings of the 2007 FSU report included statistically based criticisms of the Library Services and Technology Act (LTSA), which provides federal grants for technology and planning. [McClure, 2007] Federal funding options provided by the LTSA are insufficient and do not consider the multitude of local infrastructure issues or concerns about long and short term technology. This means that LTSA funding is insufficient for the continued growth and viability of free Internet access currently provided by public libraries. [McClure, 2007] Another funding option for public libraries has been the E-rate, which discounts the cost of telecommunications and infrastructure. The E-rate has funded over $250 million US$ in technology-related discounts for public libraries; the expenditures of these funds have established libraries as nearly universal providers of Internet access for their communities. [Jaeger, 2006]

BROADBAND ACCESS AS A PUBLIC SERVICE?

The most controversial proposed solution to disparities in broadband access has been for municipal governments, i.e. cities and counties, to offer broadband access as a public service. Over 600 municipalities offered such service as of 2005, a small but rapidly growing percentage of the over 18,000 municipalities in the United States. [Jacobsen, 2004] However, the U.S. government and states largely prohibit or restrict cities and counties from ensuring universal broadband access through complex anti-competition laws. [Jacobsen, 2004] Municipal broadband projects, and particularly the provision by cities and counties of offering free or low-cost wireless broadband networks partially subsidized by tax revenues, holds great potential to bridge the digital divide. [Travis, 2006]

Public libraries could become the 'municipal agents' whereby states could promote cities and counties to provide free and low-cost Wi-Fi broadband to their citizens by investing the telecommunications infrastructure of their community public libraries. Congress and the states could promote legislation that permitted cities and counties to offer free and low-cost Wi-Fi broadband to their citizens through the targeted funding of public libraries. In this manner, many public libraries could utilize their pre-existing wired infrastructure to develop and deploy large-scale Wi-Fi networks, which would provide blanket coverage to large urban areas and small rural areas. Thereby, effectively circumventing the current miasma of telecommunication legislation and in turn providing local communities the access to broadband-networked services.

Municipal broadband has saved many small communities from being relegated to the wrong side of the suburban-rural digital divide. Broadband Internet service was "frequently limited or lacking in rural areas" for years after it was first unveiled in urban areas. For this reason, small cities and towns in more rural parts of America have taken the initiative in providing fiber optic-based broadband to their residents. [Cox, 2005] In this manner, public libraries are in a position to continue to provide an 'infrastructure of inclusion'. By becoming the primary facility that houses the wired and wireless broadband equipment, which services large segments of their communities and being 'agents of municipalities' public libraries can influence policies which support their role in the provision of local public access computing. Cities and

municipalities have the potential to bolster the pre-existing wired infrastructure within their local public libraries to develop large-scale WiMAX networks that could transmit extensive broadband coverage to their urban and/or rural citizens free or at minimal cost per user. [Travis, 2006] Other barriers for public libraries that need to increase their bandwidth include the total cost of more bandwidth excluding connectivity, uncertainty in future funding and difficulties with complex E-rate applications. [Bolt, 2008]

Fortunately, in 2006 the U.S. Senate enacted telecommunications legislation entitled the '*Advanced Telecommunications and Opportunity Reform Act*', which could accelerate this potentiality. The bill extends the rights of state municipalities to provide Internet access through broadband technologies in their local communities. More specifically, the bill preempts state laws that prevent municipalities from providing telecommunications services (e.g. setting up large scale Wi-Fi networks to serve urban and rural areas). [Travis, 2006] To be able to address adequately the 'digital divide spectrum'; cities and municipalities must create policies that effectively ascertains broadband penetration; coordinates federal, state, and local agencies, educates the public on broadband issues, and promotes partnerships with private industry and government. [Cox, 2005]

WI-FI WAVE OF THE FUTURE?

The next major wave of wireless innovation is Wi-Fi technologies. [Jacobsen] Wi-Fi is an open standard for the wireless networking of personal computers at true broadband speeds of up to ten Mbps. [Travis, 2006] Wi-Fi access points utilize unregulated spectrum to blanket areas of dozens to hundreds of feet in diameter with broadband Internet signals. When these access points are staggered throughout an area in Wi-Fi "'mesh' networks," they operate at a surprisingly low cost-per-user. [Cox, 2005] A Wi-Fi network requires only a computer with a Wi-Fi card and an access point to rebroadcast an Internet signal. [Cox, 2005]

Since 2004, city officials across the United States have increasingly endorsed the idea of providing universal broadband access to their citizens. There are grassroots level interests in the deployment of wireless fidelity ("Wi-Fi") mesh networks to cast high-speed Internet signals across entire metropolitan areas. [Cox, 2005] Philadelphia is planning to provide Wi-Fi broadband access for a mere $10 to $20 a month throughout 135 square miles

of the city. New York City has solicited bids on a project to build "the largest municipal wireless network ever established," which would blanket Manhattan with broadband Internet access beamed to computers, portable digital devices, and emergency response personnel, even in vehicles moving at high speeds. San Francisco has pledged to its citizens that "every San Franciscan [will have]… access to free wireless internet service." [Travis, 2006] Major metropolitan cities from Florida to Washington have proposed to equalize high-speed Internet service through publicly funded Wi-Fi "clouds" transmitting high-speed Internet signals across many miles. [Travis, 2006]

PRIVATE INVESTMENT AND CORPORATE COOPERATION

The Bill and Melinda Gates Foundation administer grants to aid libraries across the U.S. in ensuring quality technology services for their underserved communities. For the past ten years, the Gates foundation has disbursed funding for public libraries to provide free public Internet access and computing services. Although relying upon other private markets to initiate equitable access to Internet technology across racial and socioeconomic lines is unlikely, there have been other promising initiatives implemented by some of America's top technological corporations. Google and EarthLink have pledged to debut free advertiser-sponsored citywide Wi-Fi broadband in San Francisco and Philadelphia. [Nobel, 2006] The plan includes providing broadband equipment to forty city-supported broadband projects in the near future. [Travis, 2006] The implication here is that that cooperative effort in policy development for public libraries can involve corporate interests who could financially alleviate the infrastructure and technology support gaps left by the Library Services and Technology Act (LTSA).

CITIES

CALLED-TO-ACTION

In the largest cities in the United States, the potentiality of Wi-Fi to bridge racial and socioeconomic digital deprivations is making itself felt most strongly. Over 200 cities were planning or constructing municipal broadband networks as of early 2005, and nearly 200 cities are currently deliberating about whether and how to implement citywide wireless broadband access. [Nobel, 2006] Cities may spend up to $700 million through 2008 in setting up Wi-Fi and wire-based high-speed networks. [Travis, 2006]

Cities and counties are currently leading the next wave in Internet infrastructure deployment through the establishment of fast, cheap, ubiquitous Internet service on a wireless platform. Wealthier suburbs and mid-sized cities have also launched municipal Wi-Fi networks. The entertainment hub of Burbank, CA has launched one of the "first municipal broadband wireless hotspot[s]" in the L.A area [Burbank, 2005]. They offer a free network covering a thirty-four-block area for over 29,000 entertainment-related employees. [Burbank, 2005] Tempe, Arizona is another city on its way to becoming one of the first mid-sized cities to provide Wi-Fi broadband to all 150,000 of their residents. [Grebb, 2005]

FOR FURTHER RESEARCH

REGIONAL LIBRARY COOPERATIVES WORKING WITHIN THE SYSTEM

In 2007, the ALA's Office for Information Technology Policy (OITP) undertook a study funded by the Bill and Melinda Gates Foundation to research the impact of Regional Library Cooperatives (RLCs) in the provision of high-speed broadband in small- and medium-sized public libraries. Regional Library Cooperatives allow state agencies and local libraries to pool their resources to manage technology infrastructure more efficiently as well as provides them with assistance with applying for complex E-Rate funding. [OITP, 2007] The study identified Regional Library Cooperatives as one of the key players in enhancing high-speed broadband and network services for small- and medium-sized public libraries through their roles as technology, administrators and political advocates. RLCs also provide the administrative expertise to facilitate the aggregation of resources between local libraries, which enables them to secure funding and provide robust broadband services to their communities. [OITP, 2007] This area needs further research in the ways in which RLCs work within the current system of public libraries and their provision of providing free broadband Internet access in the United States.

CONCLUSION

Most scholarly discussions involving the current state of the 'US digital divide' rely upon the measurement of the percentage of Americans online from home as an instrumental metaphor for determining national online accessibility. Although an accurate measurement of online participation from individual household usage statistics are important, it gives a narrow interpretation overall online usage by Americans and does not offer any solutions to the problem.

Public libraries have taken advantage of numerous financial opportunities to position themselves in the expansion of Internet access and networked based services in their local communities. Public libraries can further these goals through their participation as municipal agents of their local communities. However, the role of the public library evolves from their ability to establish effective linkages with community stakeholders involved with local government and funding organizations.

Broadband and Wi-Fi networks operated by cities and counties is financially viable option and is likely to encourage greater private broadband investment. Although, there is no comprehensive national broadband policy 'panacea' that exists which will completely bridge the digital divide. A basic understanding of the broad spectrum of factors related to the digital divide is critical when local municipalities commit to the development of locally tailored broadband deployment strategy.

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Metadata: social inclusion, social exclusion, digital divide, digital deprivation, Public Internet Access, Public libraries.

On Freedom, Thought And Technology: A Woman's Perspective

A contemplation by michelle

As a woman, as a thinker, an artist, a social activist, I should have been burned at the stake. Instead, I have access to the Internet. I can write a poem or a story and publish it on this international public space. I have no need to attend cocktail parties and smile to people I do not wish to relate to. I do not have to bear patronizing uncritical comments about my work, or interpret sexual hints. I do not have to meet the right people, express myself in ways which seem acceptable to them, or be where things are supposed to be happening … I do not have to calculate. I can write ideas and just publish them on forums, chat rooms, blogs, websites … I can even record audios, and videos, if I like. I can explore the world and any idea I come up with, jointly or knowing it is going to be read. This also means, I can be spontaneous, creative, and wild. I can improvise. Having no castle to guard against reputed experts who turn thinking into a battlefield for promotion, I have no concerns about making mistakes. I can express what I believe, even what I simply suspect. If I realize – or if people's words make me realize – my reasoning or beliefs are wrong, I can simply try again. I am free to explore. Mistakes are a chance to improve. This is the closest to my idea of giving a good use to our intelligence. On the Internet, whether your ideas or projects are finished or not, you can share your words with anybody who is interested in paying attention to them, and you can see them grow, brush them up, also as a result of free interaction. Outside the Internet, people say ideas move the world, but that is usually tolerated only after whoever had them is dead, supposing they ever made it to some arena where they could be rescued from.

As a woman, as a thinker, an artist, an activist, I would have no chances of being mentioned in History books. In this way, it would be as if I had had nothing to offer society, people, in my time and after my death. But look at all

that cyberspace! Non-powerful people have the chance to access knowledge, to share or exchange knowledge, beyond any kind of physical limitation … History has never been kind -- a loyal portrayer of what was going on. History has systematically ignored numerous intelligent ideas, experiences, achievements. It has kept smiling to the powerful, practiced intensive and extensive silencing, ruthlessly. In contrast, today if you have any contribution to make, you don't need History. You can exploit all of your fundamental freedoms -- the freedom of expression and the freedom of thought, the freedom of association. And by this practice, you can also learn to love and understand the meaning and the value of learning, communicating and evolving, individually and in the good company of other people. This is constructing a different world. Screw History.

Things are happening. You do not have to die or get murdered or be repressed to be able to express yourself publicly and to have people listening to your words. You do not have to force some alien lifestyle into your own, to get the chance to say what you want to say. And certainly, you do not have to make anyone listen to you, because your work will be enjoyed by those who wish to do so. You do not have to be powerful in terms of status, nor financially. This is a fact, and it is different to previous facts. Intelligence, like death, ignores power, and this shows on the Net. It does not matter who you are. What counts is what you say. It's your intelligence what matters. And you do not even need a name to share that.

Therefore, I would certainly say, "I live in Utopia."

De La Libertdad, El Pensameinto Y La Tecnologia:

Desde La Perspectiva De Una Mujer

Por michelle

Este artículo es una traducción de la autora (diciembre 2008)

Como mujer, pensadora, artista, activista social, debería haber ardido en la hoguera. En lugar de eso, tengo acceso a Internet. Puedo escribir un poema, una historia y publicarlo todo en este espacio internacional. No tengo que asistir a cócteles, ni sonreírle a personas con las que no me quiero relacionar. No tengo que soportar comentarios acríticos y paternalistas sobre mi trabajo, ni interpretar indirectas sexuales. No tengo que conocer a la gente adecuada, expresarme de maneras que les parezcan aceptables, ni encontrarme allí donde se supone que pasan las cosas… No tengo que calcular nada. Puedo escribir ideas y publicarlas directamente, en foros, chats, blogs, sitios web… Hasta puedo hacer grabaciones audio y vídeo, si quiero. Puedo explorar el mundo y cualquier idea que se me ocurra, con otra gente o sabiendo que va a ser leída. Lo que también significa que puedo ser espontánea, creativa, salvaje, al pensar. Puedo improvisar. Al no tener castillo que guardar ante los reputados expertos que convierten la actividad de pensar en un campo de batalla útil para promocionarse, no tengo que preocuparme si cometo algún error. Puedo expresar lo que creo, incluso lo que tan sólo sospecho. Si me doy cuenta, o si las palabras de otras personas me hacen darme cuenta de que lo que creo es erróneo, puedo volver a trabajarme el tema. Tengo toda la libertad que deseo para explorar. Los errores pueden ser oportunidades para mejorar, o cosas que hay que corregir. Lo que me parece lo que más se aproxima a mi idea de lo que sería darle un buen uso a la inteligencia.

En Internet, tanto si has dado por terminado un proyecto o una idea como si no, puedes compartir tus palabras con cualquier persona que esté interesada en prestarles atención, y puedes verlas crecer, o pulirlas, también como

resultado de esta interacción. Fuera de Internet, la gente dice que las ideas mueven el mundo (aunque se sabe que es el dinero), pero eso sólo se tolera cuando quien las tuvo ha muerto, y eso suponiendo que éstas se las apañaran para llegar alguna vez a algún lugar del que luego se las pudiera rescatar.

Como mujer, como pensadora, artista, activista, yo no habría tenido ni la más remota posibilidad de haber sido mencionada en los libros de Historia, como la inmensa mayoría de las mujeres que han sido, y como algunos hombres. Así, habría sido como si no hubiera tenido nada que ofrecer a la sociedad, a la gente de mi tiempo y de cuando yo ya hubiera muerto. Pero ¡mirad el cíberespacio! Gente que no está en el poder con la oportunidad de acceder al conocimiento, de compartirlo o intercambiarlo, más allá de cualquier limitación física… La Historia nunca ha sido amable, buena retratista de lo que estaba ocurriendo. La Historia ha ignorado, sistemáticamente, numerosas ideas, experiencias, logros inteligentes. A lo largo de los siglos le ha sonreído siempre a los poderosos, ha practicado el silenciamiento intensiva y extensivamente, con brutalidad.

Hoy en día, sin embargo, si tienes algo que decir, no necesitas la Historia. Puedes explotar todas tus libertades fundamentales, quiero decir, la libertad de expresión, la libertad de pensamiento, la libertad de asociación, hacerlo público, perdurar y con esta práctica, aprender además a amar y a comprender el valor y le significado de lo que es aprender, comunicarse, evolucionar, individualmente y en la compañía de otras personas. Esto tiene que ver con lo que yo llamo construir un mundo mejor. A la mierda la Historia...

Están ocurriendo cosas. No tienes que morir o ser asesinada o ser reprimida para poder expresarte y que otras personas escuchen tus palabras. No tienes que adoptar un estilo de vida ajeno para poder tener la oportunidad de decir lo que quieres decir. Y sin duda, no tienes que forzar a nadie a que te escuche, porque tu trabajo será disfrutado sólo por quienes deseen disfrutarlo. No tienes que estar en el poder, ni en el de la posición social, ni en el de la economía. Esto es un hecho, y es un hecho diferente a todos los anteriores. La inteligencia, como la muerte, ignora el poder, y esto se ve en la Red. No importa quién eres. Lo que importa es que tengas algo que decir, tu inteligencia; y ni siquiera necesitas un nombre para compartirla.

Por lo tanto, sí, lo diría sin dudarlo: “Vivo en Utopía”.

Human Rights Software:
Information Support Solutions For Social Justice

An article by Richard Hayman

ABSTRACT

Human rights centres and non-governmental organizations (NGOs) have crucial information support needs, many of which can be met by the existing and ongoing development of information technology software applications. For communication and Internet use, the psiphon program allows for secure and anonymous information exchange and distribution, including firewall circumvention. For data collection, organization, encryption, and storage, Martus software can be deployed to help protect sensitive information and identities. Based on documented projects and websites, the following research examines these emancipatory tools to determine: the technologies in use, emergent, and under development; their possible usage in the critical arenas under discussion; and, the greater effects of these technologies as they relate to social justice and information access in the global information society. The purpose is to raise awareness within human rights communities and information centres about the existence and availability of these tools, so that these groups may find appropriate and accessible solutions that match their information support needs. Further, it is hoped that the information presented here will generate open, intercultural, and international discussions of human rights policy development, strategic planning, and implementation.

INTRODUCTION

Preliminary research suggests that human rights centres and non-governmental organizations (NGOs) deal with specialized information types, particularly when one considers the vast amount of information and data

collection they oversee on a daily basis: testimonials and affidavits, video and audio reports, abuse analyses, basic survival needs (e.g., tracking water or food shortages), and evidential documentation for legal tribunals. Some of these varied information support needs are met by readily available computing software technologies: word processing programs, database applications, email, Web browsers, etc. Other software solutions are less known, despite their potential to help solve some of those sensitive and specialized information needs. Specific software applications have been designed with the intent that they be used in human rights work of one kind or another, such as secure communication and information dissemination, data encryption, and information storage and retrieval. These needs are all incredibly relevant for the human rights area, particularly for those organizations and NGOs operating in unstable locations or under hazardous conditions (resultant from natural disasters and/or human-made problems). While the research presented here should not be taken as complete or exhaustive, it is hoped that the accessible information presented here will promote an awareness of the tools and technologies available. This will have the primary benefit of improving human rights information work, ever more critical in the growing global information/knowledge and digital society and during an era of mass registration and surveillance. Ideally, increased adoption and awareness of these solutions with have the benefit of driving further development in this area, increasing the information and technology support given to human rights work.

LIBRARIANSHIP AND HUMAN RIGHTS

This research springs from the understanding that freedom of information and information access are core values of librarianship, and takes these values as guiding principles. Drawing together the rights to intellectual freedom, information access, and basic human dignity, and approached with a concern for the social values and responsibilities of society at large, librarians themselves have recognized the connections between their work and the protection and promotion of human rights. Here in Canada, support for human rights in librarianship can be found within the rhetoric of the Canadian Library Association (CLA), particularly in the CLA *Code of Ethics* (1976) and official position statements on *Intellectual Freedom* (1985) and *Diversity and Inclusion* (2008)

(CLA *Position Statements*). A core value of Canadian LIS includes the belief that "principles of intellectual freedom and free universal access to information are key components of an open and democratic society" (CLA *Mission, Values, & Operating Principles*). In the United States, advocacy and activism have long been part of the work of the American Library Association (ALA) (see Samek 2001 for a historical perspective). The ALA is the oldest and largest individual association of LIS professionals, and its advocacy and activist roles are found most particularly in its Social Responsibilities Round Table (SRRT). Founded in part from a "[c]oncern for human and economic rights ... [SRRT] believes that libraries and librarians must recognize and help solve social problems and inequities" ("Welcome to SRRT"). Among the greater ALA directives, support for basic human rights has been recognized in the ALA *Policy Manual*, with policies about human rights abuses (policy 9.5), by situating human rights among its overarching policy objectives (58.1), and confirmation of support for the United Nations' *Universal Declaration of Human Rights* (*UDHR*) (58.4, 58.4.1).

At the international level, the International Federation of Library Associations and Institutions (IFLA), a joint organization of library and information organization from across the globe, advocates the promotion of human rights through librarianship, information ethics, and global information justice. The *IFLA/UNESCO Public Library Manifesto* (1994) recognizes that "[f]reedom, prosperity and the development of society and individuals are fundamental human values," and views the public library as "a living force for education, culture, and information … for the fostering of peace and spiritual welfare through the mind of men and women." Other prominent arguments for the connections between librarianship and human rights include Phenix and McCook (2005), Byrne (2007), and Samek (2007). Additionally, ongoing discussions can be found through serials such as *Progressive Librarian* and *Information for Social Change,* as well as through many blogs and listservs, such as *Librarians for Human Rights* (http://justicelibraries.blogspot.com/) and HRLibs (Human Rights and Librarians, http://groups.yahoo.com/group/HRLibs/). Ultimately, the ideas of social responsibility, human rights, and the freedoms guaranteed by the *UDHR* serve as guiding principles for librarians as professionals and as individual world citizens. In our global information society, quickly becoming a global knowledge civilization, librarians and information specialists are uniquely poised to help shape the future of information ethics and

social responsibility in word and action, and to advocate for social change through continued improvement and development.

THE INTERNET AND ICT

Representing the view of LIS professionals at the international level, IFLA's *Internet Manifesto* reaffirms the fundamental human right of access to information with a direct reference to Article 19 of the *UDHR*. The *Manifesto*, unanimously ratified by the IFLA Council in 2002, recognizes the power of the Internet as a tool of information and communication, and directs libraries and information centres to act as Internet gateways and venues of free, public Internet access. It is unapologetic in its professed values, arguing vehemently for the roles of both libraries (and their librarians) as information access and support centres. Further, in calling for international understanding of and participation in the Internet and the online world, IFLA challenges governments to recognize that unfettered and unfiltered information flow is a right that should be granted to all citizens, regardless of nationality, and that assisting efforts of information accessibility and support among developing nations is an international duty. In 2003, a joint steering group formed by IFLA and the International Publishers' Association (IPA) released a statement on "Freedom of Expression on the Internet." Also drawing upon Article 19, this statement echoes much of the earlier IFLA statement. It also draws together the library and publishing worlds, recognizing that both services have interests in promoting free expression, information access, and places responsibility on the international community to maintain and promote the Internet as an unfettered information tool.

Issues of intellectual freedom and the Internet are most prevalent with regard to filtering technology. Years after popular acceptance of the Internet as an information tool, the questions surrounding who exactly is responsible for monitoring Internet behaviour of users (and especially of children) in public libraries continues to provoke vigorous debate. As a publicly funded institution, a public library is often held accountable to the community at large for every dollar in its budget, and so in many ways is expected to reflect the values of the community at large. On the other hand, as a site of information access and intellectual freedom, the same library should be opposed to censorship and

Internet filtering. The result is that many will libraries leave it to Internet users (or their parents or legal guardians) to monitor online behaviours. Much of this comes from the realization that Internet filters simply do not work in the ways one would expect. Schrader (1999) shows that many of the commercially available filtering programs are typically too discriminate, and perhaps anti-competitive, in their deselection algorithms. For example, Internet filtering software will block sexual health websites and sites that are critical of the software itself. In other cases, these programs filter much too broadly, such that entire resources and websites simply disappear, becoming "utterly invisible to searchers, leading to the conclusion that no information even exists on the topic of interest" (10). Ultimately, it is up to individual librarians/institutions to make the decision of whether to employ filtering technology. However, if the core ethics and values of the LIS profession call for open and free information access at national, international, and transnational levels, we can feel confident suggesting that the use of filtering software should be the exception, rather than the rule.

The literature discussing the intersection of information issues, human rights, and technology is engaging and varied. It is interdisciplinary in nature, and its diverse sources include grassroots communities, business and economics, research centres, the academy, and government. Given the explosion of information sharing seen since the advent of the Internet and the rise of the World Wide Web (WWW), it is not surprising that much of the research in this area focuses on the effects this communication tool has brought to the human rights sphere. For instance, Collins (2007) illustrates the effects that Internet-based and other technology-based efforts have generated results at human rights abuse testimonies, such as the ease with which digital video recordings can be captured and reproduced to help prevent rights abuses, and to document those abuses when they do occur. Collins suggests that such technology-based information resources can speak for the oppressed, often in absentia, against the authorities who commit such crimes against humanity.

In other areas, the researchers at the University of Toronto's Citizen Lab have drafted an online guide that instructs users on how to circumvent Internet filters and firewalls (2007). Written in a straightforward, approachable language aimed at the everyday user (as opposed to being overly technical), the guide presents detailed descriptions and case studies that briefly instruct the reader in

various ways he or she might employ technology to avoid authorities, bypass Internet filters, and surf the Web privately and anonymously. This and other guides are not in themselves library-related, but as information resources, their promotion of circumvention tools can empower the reader to find the same rights and goals as those promoted by LIS institutions. The Internet age has enabled new means of communication, and has thus also created a new generation of reporters that respond to the challenges of our particular information age. Armed with their laptop computers, digital cameras, and smartphones, a generation of bloggers, cyberjournalists, and hacktivists (an amalgam of hacker and activist, such as a computer hacker who illegally hacks for social or political reasons) have heralded a new age in citizen journalism and activism. They can be found operating online and based anywhere in the world, though of greatest interest are those living or working in countries where censorship is the norm and state-run media is the primary (and often only) source of information about the outside world. Often labelled as dissidents and subversives by their governments, such individuals and activists are regularly persecuted (within and outside the bounds of law), while their blogs and websites are monitored, sabotaged, filtered, shut down, or defamed by authorities. A release from Reporters Without Borders/Reporters sans frontiers, *Handbook for Bloggers and Cyber-dissidents* (2007)*,* instructs online individuals on ways to avoid detection, to more easily disseminate information, and to counteract the information barriers constructed by their oppressive regimes.

With regard to information access, it is typically in those countries and regions already known to be rights abusers that print and broadcast journalism are just as stifled as their online counterparts. Often controlled directly by or run on behalf of the government or state power, many media outlets practice various forms of censorship, self-censorship, or inside censorship, while also disseminating propaganda. This practice contributes to the erosion of human rights both informational and physically tangible. In a region where journalists fail to report or record an event that obviously violates guaranteed rights, this is no better than ignoring the problem: the journalists appear complicit with authorities, their silence equates to censorship, and so the violations and abuses continue. A recent study unsurprisingly revealed that countries that actively censor and otherwise limit information access exhibit lower human rights

standards and practices than those countries with greater information freedoms (Apodaca 2007).

The example of the "Saffron Revolution" in Myanmar/Burma is particularly relevant in this context. There the information flow through both traditional media and the Internet is controlled by the ruling military junta. Yet during the 2007 citizen revolt by Buddhist monks and the common citizenry, the power of these new technologies was evident. Through the use of technology and new citizen journalism, dissidents subverted the state media by turning the flow of information on its head. As the military response to the revolution grew more violent, the Burmese people were so effective in spreading news of the revolt and the military crackdown that the images and videos sent to the international community drew attention to their plight. These images and videos were so effective that the ruling military junta was forced to take drastic action. The government controlled the only Internet service providers (ISPs) in that country, and so it disconnected the Internet, effectively severing the electronic flow of information in and out of the country. In language of the report issued by the OpenNet Initiative (2007), a collective of research institutes that focus their efforts on Internet filtering and surveillance, the Burmese military junta "pulled the plug" on the Internet, disconnecting the country's Net access. Shortly after, the revolution lost much of its popular momentum, while widespread military and police action against citizens, monks, journalists, and reporters crushed the remaining dissidents. While misinformation and information loss are not the only factors contributing to the chaos, the resulting crackdown included citizens who were arrested without cause, "disappearances" and missing persons, and multiple deaths. At the beginning of the revolution, information communication technology (ICT) and Internet connections helped prevent abuses; once disconnected, images and documentation no longer escaped, and so the junta was able to continue its attack without international oversight. The revolution ended, and little has changed in the country.

We know that technology is in and of itself mostly benign and that, like any tool, it is in the application of the technology that can make it seem good or evil. In many cases, the same software that is used to prevent harm in school libraries, such as filtering applications, are used to commit human rights violations. Faris and Villeneuve (2008) show that Internet filtering is rampant in locations where other human rights infringements occur, particularly when the

government is interested in controlling citizen uprisings and other forms of popular dissent. They note that the practice of filtering is most on the rise in developing nations, especially among oppressive regimes in Asia and the Middle East (the Great Firewall of China and the censoring practices of Syria and Turkey are commonly used examples). Citing the expansion of Internet usage in these regions, the authors discuss how a government's original investment in hardware infrastructure and software can be easily adapted to enhance their censorship efforts. Those of us who have uninhibited access, particularly in the (mostly) democratic regions of the Western modern and developed world, must be conscious that we are using technologies that exist at a level beyond the scope and abilities of what is typically available in the developing world. The populations of developing nations can employ technology to help level the playing field between themselves and the people of the developed world. However, doing so is difficult when governments are actively subverting those tools to use against the citizenry.

Many Internet-based supporting tools for human rights work exist, but harnessing the power of the Internet alone is not enough. While blogs, forums and wikis can empower cyberdissidents, hacktivists and citizen journalists, these tools alone cannot meet the dynamic, complex, sensitive, and varied information support needs of human rights information centres and workers. Additionally, the Internet does not fill the needs gap left by common computer applications (e.g., productivity suites or email applications) that cannot or do not do what NGOs and rights organizations need them to do. Whaley (2000) notes that where technological trends are concerned, "NGOs often find that their needs are different from the interests of commercial infrastructure and software developers" (38), and that compared to many businesses, the technological needs of NGOs can be fairly simple and straightforward (38-39). It is a matter of understanding those needs, finding the will to act, and creating the technological tools to help solve them. Whaley makes a recommendation that will no doubt be important for future research projects, arguing that "NGOs need more forums in which human rights leaders can exchange ideas with IT leaders about what kind of technology would best support the spread of equality and civic discourse" (39). Here at least is one specific need expressed in clear terms: there must be communication about and understanding of the needs of rights information

workers who are to use human rights technology if the technology itself is to have any value.

As for how human rights and ICT come together as projects in action, a number of existing examples show that there are technologies in the sector that attempt to meet the information support needs of rights groups. For example, Rezaian (2007) highlights a statistical review and policy analysis of information and communication technology usage in Sub-Saharan Africa, with emphasis on specific countries where ICT project implementation is used to combat poverty. In some locations the deployment of ICT-based poverty-defeating projects has served to decrease destitution levels while simultaneously increasing local educational and information literacy levels. While technology cannot solve all problems, Rezaian argues that ICT projects can and do have positive effects on communities, when deployed in conjunction with other socially responsible initiatives, such as education programs and housing projects. He presses the need for further research in the area, as evidence of these beneficial effects have already been seen to influence national poverty-reduction policies and decisions about increasing international aid.

HUMAN RIGHTS SOFTWARE

Progress has been made with the open source software and free software movements. Within these groups we can find community-driven models of development, pushed by volunteerism and the altruistic or philanthropic desire to improve on or replace existing applications, to create solutions where none exist, and to provide programs with open code, instilling a sense of accountability. In this regard, open source and free software stand in contrast to the typical models of software development in the for-profit arena, where the bottom line and pleased shareholders are major concerns. While innovation can be slowed by disagreements over intellectual property and copyright in both for-profit and open source arenas, extra delays in development of solutions for human hit the NGO and rights sectors particularly hard. When those delays are compounded by the lack of financial return on resource investment, not to mention the potential risks to human lives that are not seeing the benefits of the technology destined to help, there is little incentive for for-profit companies to contribute to human rights software projects. On the other hand, the positive

effects of GNU General Public Licenses (GPLs) are being noticed (Vucic 2006). These licenses recognize and credit the program developers while still allowing for the free distribution and use of open source applications, diminishing the controversy while spurring future development. Similar to the Creative Commons licenses often used for sharing media, GNU GPLs can drive innovation for the sake of innovation, without worry for the bottom line. This approach recognizes that technological solutions have a wider reach than we might first imagine, and helps account for different cultural contexts, particularly those based in communitarianism and interest in the betterment of society as a whole.

What is needed now is the necessary next step between understanding the power that ICT projects can have on human rights and moving forward to full-fledged electronic information support for human rights work, NGOs, and other areas of the non-profit/not-for-profit sectors. We know that technological developments can be used to improve information collection and dissemination. Due to current advancements in human rights software implementation, the time is right for further research into the connections between human rights and technology, research that can inform future developments on both the information management and technical application sides. By focusing such research directly on information centres and workers, both the rights organizations themselves and the developers can make connections and assist one another, through software connections and ICT resource sharing. It is hard to see such collaboration in a negative light, when we know that human lives may be saved, rights violations prevented, and rights abusers exposed and brought to justice. Thus, the phrase "human rights software" refers to "the applications developed for use in rights information centres and field offices, NGOs and other organizations".

There are a number of software tools already available or under development for use in the field. Some have received media attention and been employed for specific projects, while others are little-known or are for use in specific projects or areas. This list, organized alphabetically, names some of these projects, and their URLs available at the time of writing:

- Analyzer, http://www.hrdag.org/resources/software_projects.shtml
- FrontlineSMS, http://www.frontlinesms.com/ (with mobile phone technology)

- ICA-Atom, http://ica-atom.org/
- Karapatan-Monitor, http://code.google.com/p/karapatan-monitor/
- Martus, http://www.martus.org/
- NGO-in-a-Box, http://ngoinabox.org/
- OpenEvsys, http://www.huridocs.org/tools/monitoring/openevsys
- psiphon, http://psiphon.ca/
- Sahana, http://www.sahana.lk/

When armed with one or more of these software tools, humans rights organizations will increase their information support abilities, all freely and without fear that the software has been subverted. Unfortunately, there is little opportunity here to completely detail all of these projects, so instead I highlight five of the most significant. This is not intended as a comprehensive, mutually exclusive, or detailed analysis or breakdown of these systems, or as a complete set of documentation. If the reader is looking for more information, the best resources are to be found on the website or project page to the software itself. My interest is in raising awareness about these programs, primarily so that those individuals and groups working in these arenas will be able to identify, find and use the tools built to assist in the fight for human dignities and development.

PROJECT DESCRIPTIONS

The five projects described below represent significant attempts to reshape the information support landscape for human rights work. Most are currently available and active, while other development efforts are ongoing. Of these, the last one described stands out because it is not specific software, but rather a software suite collected for use by NGOs and rights organizations. For each, I have provided basic information on the project and its operations, as well as a description of its uses, operating environment, and languages available. These programs vary in their complexities and capabilities, but they all fit the definition of programs developed for use in or for furthering human rights and/or NGO work.

Analyzer

URL: http://www.hrdag.org/resources/software_projects.shtml

Developer: Human Rights Data Analysis Group/Benetech

Availability: Free, open source; code available under GNU General Public License (GPL)

Basic description:

Analyzer is a database program that can be used to collect and store information regarding human rights violations for later analysis. Based on the "Who did what to whom?" model of human rights documentation (see Ball, 1996), it helps organizations draw together disparate pieces of information to help form a larger picture of a violation or set of abuses. The program includes various means of data analysis.

Detailed information:

The Analyzer software is in use by a number of groups and organizations, and draws on the principles that influenced the Martus project (described below). Analyzer can link to Martus for increased operability. The code is freely available online, though the website for this project suggests that the developer should be contacted before full deployment. The software can help keep records of various abuses and violations that occur during an event of interest to the NGO, records that are collected and entered by the user. It employs a controlled vocabulary system that compensates for the vast number of information sources used to gather information on abuses. This system helps provide specificity when recording abuses, making data management that much easier. This level of control also permits the program (and therefore the organization) to count and map relationships between different violations, helping connect the links between the abuser, the victim, and the events themselves. The program includes an "Inter-rater reliability" (IRR) tool that helps users maintain consistency when applying the controlled vocabulary by monitoring the terms being used.

Additional functionality allows the program to match and track different accounts of the same or similar abuses and violations. It can then generate statistics and reports reflecting the information gathered in the system about

those related events. These documents can be further analyzed to track and understand connections along the "Who did what to whom?" model. Such reports can be customized to show general or specific data. Finally, the Analyzer database is searchable, and will accept multiple user accounts, each with its own secure and user-created password.

Technical requirements:

Analyzer is available for Windows, Linux or Mac OS X operating environments, and requires an Internet connection for full operation.

Languages:

English, French, Spanish

Martus

URL: http://www.martus.org/

Developer: Benetech (Beneficent Technology)

Availability: Free, open source; code available under GNU General Public License (GPL)

Basic description:

Benetech describes Martus as the "Human Rights Bulletin System." This software is used to collect and organize information on human rights violations, and is used by NGO or rights groups to create an encrypted database of violations, victims, and abusers. This information can be archived on remote Martus servers, which helps protect against data loss through seizure by unfriendly authorities, neglect, or damage, for improved information security. Information in the password-protected database is searchable, and the program is informed by an open source philosophy.

Detailed information:

Benetech consulted human rights groups and NGOs (including the United Nations, Human Rights Watch and Amnesty International) to discuss the software needs of these groups. The beta version was tested in various locations across the globe, and improvements were made before the complete version was publicly released. According to Martus documentation, the developers wanted input from these test groups in order to develop the program according

to user needs. Thus, Martus meets the four criteria set by the field testers and consulting organizations: usability, security, searchability, and transparency.

Martus can be installed across multiple computers, and each computer can host multiple accounts. Each account relates to an individual user, and each user has password-protected access. The system permits the headquarters of an organization to create a public account that is accessible from field offices so that remote workers can access the entire database and upload their own bulletins. This is significant for easing communication and information dissemination, and ensures that key stakeholders have access to important and up-to-date information. Once logged-on, users can create and save bulletins documenting new abuses, or modify and update existing bulletins with additional information collected since the last update. Bulletins are organized into folders for ease of access and findability, and the program automatically generates certain folders for users based on sound organization principles. The folders feature also permits the user or NGO to create unique folders (for documenting a specific case for example); this allows the NGO to organize the database using the in-house information management practices already in place. Finally, while specific details within bulletins remain private (to protect victims, for obvious reasons), some bulletins can be publicly shared both within the organization and externally. This means that other rights groups, journalists, researchers, and activists can access the information in the bulletins by searching using the Martus Search Engine.

Technical requirements:

Martus is available for Windows, Linux, and Mac OS X environments, and requires an Internet connection for data backup and retrieval.

Languages:

English, Spanish, French, Russian, Thai, Arabic, Nepali

psiphon

URL: http://psiphon.ca/

Developer: Citizen Lab, Munk Centre for International Studies, University of Toronto

Availability: Free, open source; code available under GNU General Public License (GPL)

Basic description:

psiphon is a specialized anonymizing proxy that helps the user (client) circumvent Internet firewalls and filters. It intended for use by those living in countries that are known to censor Internet transmissions, and would be of particular use to journalists, cyber-dissidents, and any individual or organization requiring unfettered Net access for research and communication while operating in arenas where Internet traffic is monitored and/or filtered.

Detailed information:

Most anonymizing proxies and proxy servers/services have publicly available Internet protocol (IP) addresses that can be easily tracked and blocked by countries and organizations that employ oppressive firewalls and filters. psiphon differs from other anonymizing proxy options (e.g., Tor) in two main respects: it is software-based rather than Internet-based, and it relies on trusted social networks. Regarding the first difference, psiphon is not installed in the manner typical to most computer software, i.e., on the user's computer. Instead, a trusted administrator such as a friend or family member located outside the firewall/filter installs psiphon on his or her computer, creating an access point referred to as a psiphonode. The administrator configures the software, and then supplies the user (a psiphonite) inside the firewall with a URL specific to that particular installation, along with a username and password. When the psiphonite (the user) has this information, he or she navigates to the URL set by the psiphonode administrator. The site at the URL will require the psiphonite to authenticate, after which he or she may surf the Internet as usual. Thereafter, all Internet transmissions occur in the same manner as they would over a normal proxy: requests are transferred from the user's computer to the psiphonode, then to the website or resource requested by the user. The psiphonite computer receives the information requested from the destination website, then forwards it back to the psiphonite computer for the user to read or use.

psiphon's reliance on trusted networks and secured transmissions is what allows it to function best. In this scenario, the information passing through the firewall is directed to the psiphonode's IP address, rather than to a 'suspect' site that targeted by the firewall or filter, thus avoiding the censors. Since continued access requires that the proxy site supplied by the administrator remains unfiltered (and undetected by the authorities controlling the firewall), both the user and the psiphonode administrator must trust the other not to reveal the URL, its related IP address, or any username/password combinations that allow access to that proxy. If that trust is broken and/or the IP address revealed to the censors, then the tool is no longer effective. In such cases, the psiphonite may need to find a new psiphonode to grant proxy access, since the original psiphonode (and his/her related IP address) may end up on a blocked list.

Technical requirements:

The administrator side requires a Windows or Linux environment (a Mac OS X compatible version is under development) and Internet connection. Further, the administrator's computer must be powered and running with an active Internet connection if it is to accept requests from the client. Specific configurations of routers and firewalls on the administrator side may be necessary. The client requires a web browser and Internet connection.

Languages:

English, French, Spanish, Russian, Arabic

Sahana (Sahana Free and Open Source Disaster Management System)
URL: http://www.sahana.lk/
Developer: Lanka Software Foundation
Availability: Free, open source; code available under GNU Lesser General Public License (LGPL)

Basic description:

Sahana is intended as an information management tool for disaster zones. It sprang from relief efforts after the earthquake and subsequent massive tsunami that hit Sri Lanka and other parts of Asia in 2004, and has since been deployed in other troubled areas. It is designed for use by aid workers and organizations,

but can also be used by victims and relief volunteers, government officials, and others operating to help ease human suffering.

Detailed information:

The project website and related documentation details seven primary applications of the Sahana software:

- A *missing person registry* to help track/find missing individuals, including the ability for hosting photographs online;
- An *organization registry*, to assist coordination of various relief groups, organizations, and government support;
- A *request management system* that can match the needs of the various aid groups to the financial, material, and human resources that have been donated to the relief effort;
- A *camp registry* that maps the locations and facilities of refugee camps housing displaced disaster victims;
- A *volunteer management system*, registering volunteers working in specific areas and tracking their skills to help match and allocate those abilities in the most appropriate areas;
- An *inventory management system* to help track and accounting for different types of material aid received, based on the standards set by the World Health Organization;
- A *situation awareness overview* that can be updated to reflect the most current conditions in the disaster area for quick information dissemination, including a mapping feature.

Additional modules are available for advanced functions, including a registry for disaster victims, an application for emailing/instant messaging, an aid catalogue, and a means of synchronizing across various installations of Sahana.

The Sahana software can be deployed over a variety of platforms depending on situational needs. Large-scale setups can allow access by multiple organizations and groups, all synchronized so that each has access to the same set of information and resources. This kind of advanced setup requires slightly

more technical sophistication (such as a central server), but otherwise the software functions in the same way as the basic single-point installation (such as that used by just one organization). For events requiring less coordination, or when limited technology is available, a scaled-down version of Sahana can be used for satellite operations. The project website even shows the software running on a version of the minimalist computer developed for the One Laptop Per Child (OLPC) program, which is another interesting innovation of ICT for human rights and social development. Sahana has been deployed in several locations, and is the recipient of a number of awards.

Technical requirements:

Sahana is available for Windows, Linux, and Mac OS X environments. It can be run using a web-based interface, can be adapted for portability.

Languages:

English, Sinhala

NGO-in-a-Box

URL: http://ngoinabox.org/

Publisher: Tactical Technology Collective (software is not developed by Tactical Tech)

Availability: Free, open source software collected on CD or DVD; some downloadable disc images.

Basic description:

NGO-in-a-Box is unique from the other solutions discussed here in that it is not in itself computer software. Instead, NGO-in-a-Box is a software suite that has been drawn together to create a set of programs that are of interest to NGOs and others who work in the area of human rights. The software in each suite has been peer-reviewed and handpicked by experts and others with experience in human rights advocacy and human rights information work. The suites collected by NGO-in-a-Box epitomize the power of free and open source software.

Detailed information:

The Tactical Technology Collective has organized the software suites into a number of separate editions. Since the programs bundled into each suite vary depending on the edition, it is difficult to document all of the features available

through the NGO-in-a-Box program. Instead, I describe the software boxes currently available:

- *Base Box*: This set of software that is primarily for day-to-day operations and productivity. This includes office suite software (such as word processing tools), programs for project, staff, and financial, management, web-browsing, email, and instant messaging, and others.

- *Security Edition*: This suite collects software tools for password protection and maintenance; secure data storage and destruction, encryption, firewall and anti-virus protection, and safe communications. Free and open source programs primarily comprise this suite, though a few trial versions of other programs are included.

- *Audio/Video Edition*: This edition contains a number of programs that can be used to create audio and/or video as part of an organization's advocacy campaign. Its audio components include programs for editing, streaming, and podcasting, and for creating audio CDs. Its video programs can be used for editing and vodcasting (video podcasts), as well as for creating playable DVDs. It also includes a release of Dyne:bolic, a Linux distribution that is specialized for producing multimedia.

- *Open Publishing Edition*: A set of software for publishing and disseminating information and content. It includes tools for desktop publishing and graphic design, as well as for creating webpages, blogs and wikis. This version pairs naturally with the Audio/Video Edition.

Since each suite offers a unique set of software applications, it is up to the individual NGO or rights group to determine which box will best meet their needs. However, to help facilitate such decisions, each suite listed above is accompanied by documentation that explains the installation and use of each of the included programs. Many also have tutorials that take the user through basic use of some of the included applications. Finally, the Tactical Tech team and their partners try to ensure that the technologies are entry-level tools, not overly technical or sophisticated. While this may mean reduced functionality in comparison to professional applications available on the market, the NGO-in-a-Box suites are intended for general users. By drawing upon already-available

free and open source software, the NGO-in-a-Box suites offer ready-made solutions to some of the most crucial information support problems.

Technical requirements:

The technical requirements for each suite vary depending on the individual programs offered. Most are for Windows and/or Linux operating environments, and some include an installable distribution of a Linux version with the disc or as part of the download.

Languages:

This too varies across the different programs, though collecting English versions of all programs for the various suites seems to be the primary focus.

CONCLUSION

These project descriptions are based on information and associated documentation that is readily available on developers' publicly accessible webpages. In some cases, that documentation was detailed and specific, while in others it was necessary to delve a little deeper to find and better understand what the applications did and how they worked. I find it interesting that the phrase "human rights software" leads to approximately 800 Google hits (at the time of writing), and that most of those are repetitions of stories about Martus or psiphon. To me, this seems an awfully small figure given the number of human rights and non-governmental organizations, institutions, research centres, not-for-profits, advocates, activists and other groups and individuals that can be found online. What is missing from the literature (popular and academic) to date is a single information resource that brings together descriptions of these software solutions in one location. I hope that the treatment here begins to fill that gap. I see the necessary next step to be a formal assessment of the information support needs of rights information workers in light of these findings. When we know that technological developments can improve information collection for human rights work, it makes little sense that those needs remain unexamined or misunderstood. I suggest that future research should focus on understanding those needs, which in turn can direct researchers and programmers toward improving or creating the technological tools to meet the needs. By focusing future research on the ICT needs of information centres and workers themselves, we can create new opportunities for development and innovation in the field of human rights

information support, innovations that can be informed by and based in practical research evidence.

These and other free and open source software solutions can be of great benefit to human rights and NGO work. The transparency of open source means accountability for the programmers, but also for the agency or group using the software. This provides and additional level of data security, as all stakeholders can be assured that both data/information and its technical manipulation occur under controlled and verifiable conditions. In this vein, Oram (2002) give the example of a rights organization presenting its findings to a government or other power-holder. In this situation, when reporting abuses and violations, "[a] lot of an organization's credibility lies in its process for collecting data and its use of statistics, but the software [it uses] has to be certified to be trustworthy." Along with those other standards, Oram also notes that open source and free software poses fewer problems for organizations when it comes to the transferability of software licenses and copyright, because none can question whether the organization legitimately "owns" the software being used.

These valuable software solutions are born of the ingenuity and dedication of socially conscious individuals the world over. In and of themselves they are only tools, but the human application of these programs has the potential to help solve rights crises and abuses both seen and unseen. Human rights software programs are specifically designed to help those who help others, and contribute to social justice solutions and the betterment of humankind. By calling for increased attention to, and by raising awareness of, these ICT solutions for human rights, those who need these tools have a chance of discovering them, and those who develop these applications will know that their work is both important and needed. It is hoped that this will encourage greater communication and sharing between the communities, and will encourage community feedback about what works, what does not work, and where there is room for improvement and new development.

I am not suggesting that these programs are the technological panaceas for all information support needs in NGO and human rights arenas, nor that open source or free software will help everyone, everywhere, in every situation. However, consider that these programs are the creative output of select individuals or groups that, when taken together, are fed by and in turn feed into the open source and free software movements. This is a new locus for sharing

and collaboration, not just of technology, but sharing of knowledge of and about the processes that can improve human rights. These communities are dedicated to finding useful, workable, and free technological solutions to some of our civilization's most pressing problems. Meanwhile, across the world numerous groups and private citizens have dedicated their time and efforts toward finding and providing aid on the front lines of human rights and NGO work; toward tracking, documenting, and preventing abuses; toward saving human lives. My goal here is to encourage continued discourse and awareness between these two spheres. If as a concerned society we can emphasize and commit ourselves to the kinds of ideals that influence the open source and free software movements — community, collaboration, inclusion, diversity, choice — we have in front of us the opportunity to direct efforts toward building a information society and knowledge civilization where information freedom and human dignity are strong realities. This utopia may be an ideal not to be realized in our lifetimes, but the necessary struggle toward that goal lies with us here and now.

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Techno-Fixes

A review by Martyn Lowe

Fauset, Claire.Techno-fixes: a critical guide to climate change technologies.Corporate Watch. 2008
ISSN: 0955343125 & 9780955343131.

The continual use of fossil fuels must end if we are ever to going to solve the problems which face us due to climate change. The only question is just how we might be able to achieve such a change. In *Techno-fixes*, Claire Fauset examines the issue by looking at the various technological and social issues which need to be addressed if we are ever going to reduce our energy needs. Thus her pamphlet probes various available types of energy generating technologies and numerous proposals for reducing carbon levels in the atmosphere - which are the result of burning fossil fuels. She does this by describing how each of these technologies works and highlighting its advantages and disadvantages. She also scores each technology for its effectiveness, democratic ownership and control, sustainability, and scalability.

The most important conclusions which are reached by Fauset relate to how we cannot solely depend upon alternative technology to fix things for us; we must also change our social structures in order to solve global warming. This position then is very much rooted in political action and economic change. For example: The use of biofuels for private transport may be used to illustrate why we need to look at the social and other costs which some so-called alternatives impact upon us. The multinationals are never going to solve these problems while they are still very much focused upon profits and economic growth. The thing that this pamphlet clearly illustrates is that carbon trading is a complete failure. To quote the pamphlet: "Corporations may fool the market, but they can't fool the environment."

This is a pamphlet which everyone should read, and then think about its conclusions. And for more information about this publication and about Corporate Watch, see: http://www.corporatewatch.org

Note: One of the technologies which is sometimes now being quoted as "alternative" is Nukiller power (please don't laugh)! Aside from any arguments on radiation which one make here,
it should be noted that the mining and transportation of Uranium generates a lot of pollution and carbon emissions. It is also a highly centralised power source which must always be resisted. The ineffectivrness of carbon trading was also illustrated in an article by Carl Mortished in the business pages of *The Times*. (See: "Policy leap vital for any serious cut in carbon emissions." The Times - November 5th 2008.) The main point of the article is that method of cutting down global warming is a failure because the price of carbon trading has collapsed.

December 31

A poem by michelle

When I was little, I remember I didn't like
the last day in the year because my mum,
all dolled up and after dinner,
rushed out to the world, without me.
The door closed and it was good time I went to bed.

In my teenage, I remember I lost my companion,
my beautiful bitch, in a crowd.
We'd ran away from home. My heart sank,
and then I found her. What joy, what relief.
And after a threatening night
fighting the bitter cold, together,
we saw some workers carrying away
our friend from the corner,
the homeless who told me
that the cold was just in my imagination.
And he was right and wrong at the same time.

When I was a young woman,
I remember a 31st when I overslept.
People had already eaten the grapes
and burned up the fireworks.
I woke up, jumped out of my freezing bed in an attic
with no water, no toilet, no electricity, no stove.
I crept out the window,
onto the red-tiled roof
to watch the light of the city coming up like smoke. …
I smiled. I felt absolutely happy. Unknowingly,

I was able to enjoy the sunny side of poverty.
But poverty was not a good place to be in.

Then, I remember being a pacifist,
an international witness in a country at war.
I had a mission. Workers had locked themselves in a factory,
and it was in the air -- a death squad might hit the scene.
It was scary. I held tight to my camera,
watched the night with all my senses
and pretended nothing would ever happen.
The guard, hired by the owners, got drunk.
He came to me. He was so young.
For weeks, he had been watching us
caring, doing what we thought was right,
and he didn't want me to think
he was on the dark side.

I reminded him we were nonpartisan - we did not
see the world in terms of friends or fiends.
He wasn't listening. He had something to tell me.
I could have cried my life out of me just to make him shut up.
I don't remember well. ... It's just I saw in his eyes
he'd be questioned by his pals, he'd be tortured and murdered,
and then we'd find him, is it him?, yes, it is,
in a ditch, like all the others. ...
I couldn't bear the thought of finding him in a ditch.
Would they just please leave him on the ground. ...
I couldn't bear the pain of knowing what life is like
and knowing it could be something else but it would not.

I also remember friendship in a few 31sts.
Spending the whole night at home, coming out of our
flatshared rooms into the common area, the sitting room,
to chat away all night long, or just be there, together.

I remember a 31st in the basement of a housing co-op in a metropoli,
all bundled up in bed, reading "One hundred years of solitude"
with my mother's death in the air,
my fight for independency and survival, against confusion, in my breath.
I remember I read nonstop for over 24 hours,
till I finished the book. No time to spare.

Then one year, I was under the cold rain
in front of an open fire next to a military base.
A grumpy woman pointed to a muddied old van
where I could pick a mat, a blanket, a sleeping bag,
and then to a bender where I could seek refuge in the night.
Again, I was somewhere, with people, trying to change the world,
trying my best to fight the fears and violence in the world
and my own demons. And it was all powerful and fresh.
I felt like a wild beautiful animal in the night,
ready to lift the sun with my mates,
to warm and heal this aching nightmare planet.

And today I look into your quiet loving eyes
and I can't believe it's the same life, my sweet love.
Now I know that when I was there you'd already left.

I don't know what will be
but one thing seems to be certain --
love's got some part in it.

31 de diciembre

Por michelle

Cuando era pequeña, recuerdo que no me gustaba
el último día del año porque mi madre,
hecha una princesa, después de la cena,
volaba al mundo, sin mí.
La puerta se cerraba y ya era hora de ir a dormir.

En mi adolescencia, perdí a mi compañera,
mi preciosa perra, entre la gente que pasaba sin cesar.
Nos habíamos fugado de casa. Se me encogió el alma,
y entonces la encontré. Qué alegría, qué alivio.
Pasada la noche que acechaba, llena de peligros,
combatiendo el frío amargo, juntas,
vimos cómo unos trabajadores se llevaban el cuerpo
de nuestro amigo de la esquina,
el viejo vagabundo que me dijo
que el frío estaba sólo en mi mente.
Y tenía razón, y al tiempo, no la tenía.

Cuando era una mujer joven,
recuerdo un 31 en el que me quedé dormida.
La gente ya se había tomado las uvas
y los fuegos artificiales habían terminado.
Me desperté, abandoné las sábanas de escarcha
de mi buhardilla sin agua, sin baño, sin luz, sin cocina.
Salí por el ventanuco
para sentarme en las tejas de arcilla roja
y mirar cómo subía la luz de la ciudad, como el humo. ...
Sonreía. Me sentía absolutamente feliz. Sin saberlo,

sabía disfrutar a pesar de la pobreza. Era una persona.
Pero la pobreza no era un buen lugar para vivir.

Más tarde, recuerdo una misión como pacifista,
como testiga internacional en un país en guerra.
Los trabajadores se habían encerrado en una fábrica,
y se respiraba en el ambiente: podría aparecer un escuadrón de la muerte.
Daba mucho miedo. Me aferré a la cámara,
vigilé la noche con todos mis sentidos
e hice como si no jamás pudiera ocurrir nada.
El guardia, contratado por los dueños, se emborrachó.
Vino a mí. Era tan joven.
Llevaba semanas observándonos,
cómo nos importaban las cosas,
cómo hacíamos lo que creíamos que debíamos hacer,
y no quería que yo pensara que él estaba en el lado oscuro.

Le recordé que éramos no partidistas: no veíamos el mundo
como un lugar de buenos y de malos.
No me escuchaba: tenía algo que decirme.
Si muriéndome de llanto hubiera podido hacerle callar. ...
No lo recuerdo bien... Sólo que al mirarle a los ojos vi
a sus compañeros interrogándole, que le torturarían y asesinarían,
y después que le encontraríamos, ¿es él?, sí,
en una zanja, como a todas las otras personas...
No podía soportar la idea de encontrarle en una zanja.
Por favor, se lo ruego, podrían tan sólo dejarle tendido en el suelo...
No podía soportar el dolor de saber cómo es la vida
y saber también cómo podría ser y nunca lo sería.

De algunos treintayunos recuerdo también la amistad.
pasar la noche entera en casa, saliendo de nuestros cuartos
en el piso compartido a la zona común, el salón,
para hablar, para estar ahí, juntos.

Recuerdo un 31 en el sótano de una cooperativa de vivienda en una en la metrópoli
hecha un gurruño en la cama, leyendo "Cien años de soledad"
respirando la muerte de mi madre,
mi lucha por la libertad y la supervivencia, contra la confusión...
Recuerdo que leí más de 24 horas sin parar,
hasta terminar el libro. No había tiempo que perder.

Y un año, bajo la lluvia helada
delante de un fuego abierto, junto a una base militar.
Una mujer, de mal humor, me señalaba a una vieja furgoneta, llena de barro,
donde podría coger un aislante, una manta, un saco de dormir,
para ir después al plástico que me refugiaría de la noche.
De nuevo, estaba en un lugar, con gente, intentando cambiar el mundo,
poniendo todo mi empeño en luchar contra la violencia del mundo
y mis propios demonios. Y todo era poderoso y fresco.
Me sentí como un animal salvaje y bello en la oscuridad,
lista para levantar el sol con mis compañeras,
y así dar calor y curar este planeta herido de pesadillas.

Y hoy, miro tus ojos, tranquilos y llenos de dulzura
y no puedo creer que se trate de la misma vida, mi amor.
Sé que cuando yo estuve allí, tú ya te habías marchado.

No sé qué será
pero algo parece cierto:
el amor tuvo algo que ver.

Utopia

Paul Catherall

Reading about Utopia,
that edifice of Moore and Swift -
I wonder how they metered out
such certainties.
I'm sure that if I had the chance,
I'd conjure up Utopia
not in the pages of a book
but here on Earth.

Art is a fallacy, were we
to look closely at the painting,
or deep enough
into some gothic pile,
we'd find pure logic, or at least
how it appeared in the craftsman's brain.

Life also, the tapestry of chance -
consider well the myriad fate of men,
some silently toward a baleful night
descend, under heaven's watchful glare;
others, a long and placid vista watch
their world rotate upon its ambient course;
mummers and clowns perform life's travesties -
a sublime mirror to reality.

A siren beckons us to promised shores,
more beguiling than the gorgon's stare,
or twinkling diamonds in the veil of night -
our saviour and our bane, Utopia.